ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2019–0051; FRL–9994–76–Region 9]

Approval of Air Quality Implementation Plans; California; South Coast Air Basin; 1-Hour and 8-Hour Ozone Nonattainment Area Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, or conditionally approve, all or portions of five state implementation plan (SIP) revisions submitted by the State of California to meet Clean Air Act (CAA or "the Act") requirements for the 1979 1-hour, 1997 8-hour, and 2008 8-hour ozone national ambient air quality standards (NAAQS or "standards") in the Los Angeles—South Coast Air Basin, California ("South Coast") ozone nonattainment area. The five SIP revisions include the "Final 2016 Air Quality Management Plan," the "Revised Proposed 2016 State Strategy for the State Implementation Plan," the "2018 Updates to the California State Implementation Plan," the "Updated Federal 1979 1-Hour Ozone Standard Attainment Demonstration," and a local emission statement rule. In today's action, the EPA refers to these submittals collectively as the "2016 South Coast Ozone SIP." The 2016 South Coast Ozone SIP addresses the nonattainment area requirements for the 2008 ozone NAAQS, including the requirements for an emissions inventory, attainment demonstration, reasonable further progress, reasonably available control measures, contingency measures, among others; establishes motor vehicle emissions budgets; and updates the previously-approved control strategies and attainment demonstrations for the 1-hour ozone NAAQS and the 1997 ozone NAAQS. The EPA is proposing to approve the 2016 South Coast Ozone Plan as meeting all the applicable ozone nonattainment area requirements except for the reasonable further progress contingency measure requirement, for which the EPA is proposing conditional approval.

DATES: Written comments must arrive on or before July 17, 2019.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2019–0051 at *https://www.regulations.gov.* For comments submitted at *Regulations.gov*, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: John Ungvarsky, Air Planning Office (AIR–2), EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 972–3963, or by email at *ungvarsky.john@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us" and "our" refer to the EPA.

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I. Regulatory Context

A. Ozone Standards, Area Designations, and SIPs

Ground-level ozone pollution is formed from the reaction of volatile organic compounds (VOC) and oxides of nitrogen (NO_X) in the presence of sunlight.[1] These two pollutants, referred to as ozone precursors, are emitted by many types of sources, including on-and off-road motor vehicles and engines, power plants and industrial facilities, and smaller area sources such as lawn and garden equipment and paints.

Scientific evidence indicates that adverse public health effects occur following exposure to ozone, particularly in children and adults with lung disease. Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases.[2]

Under section 109 of the CAA, the EPA promulgates NAAQS for pervasive air pollutants, such as ozone. The NAAQS are concentration levels that, the attainment and maintenance of which, the EPA has determined to be requisite to protect public health and welfare. In 1979, the EPA established the 1-hour ozone NAAQS of 0.12 parts per million (ppm) (referred to herein as the "1-hour ozone NAAQS").[3] Section 110 of the CAA requires states to develop and submit SIPs to implement, maintain, and enforce the NAAQS.

Under the CAA, as amended in 1977, the EPA designated all areas of the country as "nonattainment," "attainment," or "unclassifiable" with respect to each NAAQS, and in so doing, designated the South Coast[4] as a nonattainment area for photochemical oxidant (later ozone).[5] States with nonattainment areas are required to submit revisions to their SIPs that

[1] The State of California refers to reactive organic gases (ROG) rather than VOC in some of its ozone-related SIP submissions. As a practical matter, ROG and VOC refer to the same set of chemical constituents, and for the sake of simplicity, we refer to this set of gases as VOC in this proposed rule.

[2] "Fact Sheet—2008 Final Revisions to the National Ambient Air Quality Standards for Ozone" dated March 2008.

[3] 44 FR 8202 (February 8, 1979).

[4] The South Coast includes Orange County, the southwestern two-thirds of Los Angeles County, southwestern San Bernardino County, and western Riverside County (see 40 CFR 81.305).

[5] 43 FR 8962 (March 3, 1978).

include a control strategy and technical analysis to demonstrate how the area will attain the NAAQS (referred to as an "attainment demonstration"), and the EPA took action on a number of related SIP revisions submitted by the California Air Resources Board (CARB) in the late 1970s and 1980s for the South Coast 1-hour ozone nonattainment area.[6] By 1990, like many other areas throughout the country, the South Coast had not attained the 1-hour ozone NAAQS, and under the CAA Amendments of 1990, the South Coast was classified as an "Extreme" nonattainment area for the 1-hour ozone NAAQS with an attainment deadline of November 15, 2010 and was subject to additional SIP planning requirements, including a revised attainment demonstration.[7]

In the wake of the classification of the South Coast nonattainment area as Extreme for the 1-hour ozone NAAQS, CARB submitted a number of SIP revisions for the South Coast that contained attainment demonstrations for the 1-hour ozone NAAQS and other SIP elements, and that relied on a combination of mobile source control measures adopted by CARB and stationary source control measures adopted by the South Coast Air Quality Management District (SCAQMD or "District"). In connection with these submittals, the EPA took the following actions:

- 1994 South Coast Air Quality Management Plan (AQMP) and related state strategy—The EPA approved the 15 percent Rate-of-Progress (ROP) demonstration and the attainment demonstration, among other elements, for the 1-hour ozone NAAQS at 62 FR 1150 (January 8, 1997);
- 1997 AQMP, as revised in 1999—The EPA approved the revised control strategy and attainment demonstration for the 1-hour ozone NAAQS at 65 FR 18903 (April 10, 2000); and
- 2003 AQMP and related state strategy—The EPA approved certain new commitments for emissions reductions but disapproved the revised 1-hour ozone attainment demonstration at 74 FR 10176 (March 10, 2009).

Each of these plans builds upon a foundation of regulations adopted and implemented by the SCAQMD, CARB, and the EPA for stationary and mobile sources, and includes commitments for new or more stringent regulations to achieve additional emissions reductions necessary for attainment. Each subsequent ozone plan then builds upon the foundation of the new or strengthened regulations that were adopted to support the previous plan. While the emissions reduction measures implemented under these South Coast ozone plans have been successful in reducing ozone concentrations in the South Coast, the South Coast failed to attain the 1-hour ozone NAAQS by the applicable attainment date of November 15, 2010.[8]

In 1997, the EPA revised the NAAQS for ozone, setting it at 0.08 ppm averaged over an 8-hour timeframe (referred to herein as the "1997 ozone NAAQS") to replace the existing 1-hour ozone NAAQS of 0.12 ppm.[9] In 2004, the EPA designated and classified the South Coast area as a "Severe-17" nonattainment area for the 1997 ozone NAAQS but later granted CARB's request to reclassify the South Coast to Extreme nonattainment for the 1997 ozone NAAQS.[10] The corresponding applicable attainment year for the 1997 ozone NAAQS in the South Coast is 2023. In response to this designation, CARB submitted the 2007 South Coast AQMP and related 2007 State Strategy, as amended in 2009 and 2011 (collectively, referred to as the "2007 South Coast Ozone SIP") and the EPA took the following action:

- 2007 South Coast Ozone SIP—Among other elements, the EPA approved the emission inventory, reasonably available control measures demonstration, reasonable further progress demonstration, control strategy and attainment demonstration for the 1997 ozone NAAQS at 77 FR 12674 (March 1, 2012), amended at 77 FR 70707 (November 27, 2012).

The 1997 ozone NAAQS control strategy in the 2007 South Coast Ozone SIP builds upon the control strategy established under the previous 1-hour ozone plans. In connection with our approval of the South Coast attainment demonstration for the 1997 ozone NAAQS, the EPA approved a number of commitments by CARB and the SCAQMD as part of the California SIP. The commitments included bringing certain defined measures before their respective boards by certain dates, achieving certain aggregate emissions reductions by certain milestone years, and achieving emissions reductions from development and implementation of advanced control technologies under CAA section 182(e)(5).

In 2012, the EPA's 2009 final partial approval and partial disapproval action on the 2003 AQMP and related state strategy for the 1-hour ozone NAAQS was successfully challenged in the Ninth Circuit Court of Appeals,[11] and in response, the EPA issued a SIP call under CAA section 110(k)(5) to California for a new 1-hour ozone attainment demonstration for the South Coast.[12] CARB and the District, in turn, prepared and submitted a new attainment demonstration for the 1-hour ozone NAAQS as part of the 2012 AQMP, and the EPA took the following action:

- 2012 AQMP—The EPA approved new control measures and commitments for both the 1-hour ozone NAAQS and 1997 ozone NAAQS and approved a new attainment demonstration for the 1-hour ozone NAAQS in the South Coast that provides for attainment of the 1-hour ozone NAAQS by December 31, 2022 at 79 FR 52526 (September 3, 2014).

The SIP revisions that are the subject of today's proposed action update certain commitments made in connection with the 2007 South Coast Ozone SIP for the 1997 ozone NAAQS and the 2012 AQMP for both the 1997 ozone NAAQS and the 1-hour ozone NAAQS. These revised commitments reflect updated emissions inventories and new modeling results.

In 2008, the EPA lowered the 8-hour ozone NAAQS to 0.075 ppm (referred to herein as the "2008 ozone NAAQS") to replace the 1997 ozone NAAQS of 0.08 ppm.[13] In 2012, the EPA designated the South Coast as nonattainment for the 2008 ozone NAAQS and classified the area as Extreme.[14] Areas classified as Extreme must attain the NAAQS within 20 years of the effective date of the nonattainment designation.[15] The SIP

[6] Under California law, CARB is the state agency that is responsible for the adoption and submission to the EPA of California SIPs and SIP revisions, and it has broad authority to establish emissions standards and other requirements for mobile sources. Local and regional air pollution control districts in California are responsible for the regulation of stationary sources and are generally responsible for the development of regional air quality plans. In the South Coast, the South Coast Air Quality Management District develops and adopts air quality management plans to address CAA planning requirements applicable to that region. Such plans are then submitted to CARB for adoption and submittal to the EPA as revisions to the California SIP.

[7] 56 FR 56694 (November 6, 1991).

[8] 76 FR 82133 (December 30, 2011).

[9] 62 FR 38856 (July 18, 1997).

[10] 75 FR 24409 (May 5, 2010).

[11] *Association of Irritated Residents* v. *EPA*, 632 F.3d 584 (9th Cir. 2011), reprinted as amended on January 27, 2012, 686 F.3d 668, further amended February 13, 2012.

[12] 78 FR 889 (January 7, 2013).

[13] 73 FR 16436 (March 27, 2008). The EPA further tightened the 8-hour ozone NAAQS to 0.070 ppm in 2015, but this proposed action relates to the requirements for the 1-hour ozone NAAQS, the 1997 ozone NAAQS and the 2008 ozone NAAQS. Information on the 2015 ozone NAAQS is available at 80 FR 65292 (October 26, 2015).

[14] 77 FR 30088 (May 21, 2012).

[15] CAA section 181(a)(1), 40 CFR 51.1102 and 51.1103(a).

revisions that are the subject of today's proposed action address the Extreme nonattainment area requirements that apply to the South Coast for the 2008 ozone NAAQS.

B. The South Coast Ozone Nonattainment Area

The South Coast nonattainment area for the 2008 ozone NAAQS consists of Orange County, the southwestern two-thirds of Los Angeles County, southwestern San Bernardino County, and western Riverside County. The South Coast nonattainment area encompasses an area of approximately 6,600 square miles and is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east.[16] The population of the South Coast nonattainment area is over 16 million people, and it is projected to increase by 13 percent to over 18 million people in 2031.[17] The AQMPs and state control measures discussed above have produced significant emissions reductions over the years and improved air quality in the South Coast. For instance, the 8-hour ozone design value for the South Coast decreased from 0.166 ppm to 0.102 ppm from 1995 to 2015, despite substantial increases in population and business and vehicular activity, and the 1-hour ozone design value decreased from 0.250 ppm to 0.130 ppm over that same period.[18]

C. CAA and Regulatory Requirements for 2008 Ozone Nonattainment Area SIPs

States must implement the 2008 ozone NAAQS under Title 1, part D of the CAA, including sections 171–179B of subpart 1 ("Nonattainment Areas in General") and sections 181–185 of subpart 2 ("Additional Provisions for Ozone Nonattainment Areas"). To assist states in developing effective plans to address ozone nonattainment problems, in 2015, the EPA issued a SIP Requirements Rule (SRR) for the 2008 ozone NAAQS ("2008 Ozone SRR") that addressed implementation of the 2008 standards, including attainment dates, requirements for emissions inventories, attainment and reasonable further progress (RFP) demonstrations, among other SIP elements, as well as the transition from the 1997 ozone NAAQS to the 2008 ozone NAAQS and associated anti-backsliding requirements.[19] The 2008 Ozone SRR is codified at 40 CFR part 51, subpart AA. We discuss the CAA and regulatory requirements for the elements of 2008 ozone plans relevant to this proposal in more detail below.

The EPA's 2008 Ozone SRR was challenged, and on February 16, 2018, the U.S. Court of Appeals for the D.C. Circuit ("D.C. Circuit") published its decision in *South Coast Air Quality Management District* v. *EPA*[20] ("*South Coast II*")[21] vacating portions of the 2008 Ozone SRR. The only aspect of the *South Coast II* decision that affects this proposed action is the vacatur of the alternative baseline year for RFP plans. More specifically, the 2008 Ozone SRR required states to develop the baseline emissions inventory for RFP plans using the emissions for the most recent calendar year for which states submit a triennial inventory to the EPA under subpart A ("Air Emissions Reporting Requirements") of 40 CFR part 51, which was 2011. However, the 2008 Ozone SRR allowed states to use an alternative year, between 2008 and 2012, for the baseline emissions inventory provided that the state demonstrated why the alternative baseline year was appropriate. In the *South Coast II* decision, the D.C. Circuit vacated the provisions of the 2008 Ozone SRR that allowed states to use an alternative baseline year for demonstrating RFP.

II. Submissions From the State of California To Address 2008 Ozone Requirements in the South Coast

A. Summary of Submissions

In this document, we are proposing action on all or portions of five SIP revisions, which are described in detail in the following paragraphs. Collectively, we refer to the relevant portions of the five SIP revisions as the "2016 South Coast Ozone SIP."

1. SCAQMD's 2016 Air Quality Management Plan

On April 27, 2017, CARB submitted the Final 2016 Air Quality Management Plan (March 2017) ("2016 AQMP") to the EPA as a revision to the California SIP.[22] The 2016 AQMP addresses the nonattainment area requirements for the South Coast for the 2008 ozone NAAQS, the 2006 fine particle ($PM_{2.5}$) NAAQS and the 2012 $PM_{2.5}$ NAAQS, and for the Coachella Valley for the 2008 ozone NAAQS. It also updates the approved attainment demonstrations for the 1-hour ozone and 1997 ozone NAAQS for the South Coast and adds new measures to reduce the reliance on section 182(e)(5) new technology measures to attain those standards. We have already taken action to approve the 2016 AQMP with respect to the 2006 $PM_{2.5}$ NAAQS (except for the related contingency measure element).[23] In this document, we are proposing action on the ozone portion of the 2016 AQMP for the South Coast. Action on the portions of the 2016 AQMP that relate to the 2012 $PM_{2.5}$ NAAQS in the South Coast and to the 2008 ozone NAAQS in Coachella Valley will be taken in separate rulemakings.

The SIP revision for the 2016 AQMP includes the various chapters and appendices of the 2016 AQMP, described further below, plus the District's resolution of adoption for the plan (District Resolution 17–2) and CARB's resolution of adoption of the 2016 AQMP as a revision to the California SIP (CARB Resolution 17–8) that include commitments on which the 2016 AQMP relies.[24] With respect to ozone, the 2016 AQMP addresses the CAA requirements for emissions inventories, air quality modeling demonstrating attainment, reasonably available control measures (RACM), RFP, advanced technology/clean fuels for boilers, transportation control strategies and measures, and contingency measures for failure to make RFP, among other requirements.

The 2016 AQMP is organized into eleven chapters, most of which are relevant to the ozone NAAQS in the South Coast.[25] Chapter 1,

[16] For a precise definition of the boundaries of the South Coast 2008 ozone nonattainment area, see 40 CFR 81.305.

[17] 2016 AQMP, page 1–5.

[18] For the 8-hour ozone NAAQS, the design value at any given monitoring site is the 3-year average of the annual fourth highest daily maximum 8-hour average ambient air quality ozone concentration. For the 1-hour ozone NAAQS, the design value at any given monitoring site is the fourth highest daily maximum 1-hour ozone concentration measured over a three-year period. The maximum design value among the various ozone monitoring sites is the design value for the area. The ozone data for 1995 through 2015 are from appendix II ("Current Air Quality") of the 2016 AQMP.

[19] 80 FR 12264 (March 6, 2015).

[20] *South Coast Air Quality Management District* v. *EPA*, 882 F.3d 1138 (D.C. Cir. 2018) ("*South Coast II*").

[21] The term "*South Coast II*" is used in reference to the 2018 court decision to distinguish it from a decision published in 2006 also referred to as "*South Coast*." The earlier decision involved a challenge to the EPA's Phase 1 implementation rule for the 1997 ozone NAAQS. *South Coast Air Quality Management Dist.* v. *EPA*, 472 F.3d 882 (D.C. Cir. 2006).

[22] Letter dated April 27, 2017, from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX.

[23] 84 FR 3305 (February 12, 2019).

[24] SCAQMD Board Resolution 17–2, March 3, 2017; CARB Board Resolution 17–8, 2016 Air Quality Management Plan for Ozone and $PM_{2.5}$ in the South Coast and the Coachella Valley, March 23, 2017.

[25] The following chapters or portions thereof in the 2016 AQMP were submitted for information only and are not subject to review as part of the SIP revision: The portion of Chapter 6 that is titled "California Clean Air Act Requirements" and that discusses compliance with state law requirements

"Introduction," introduces the 2016 AQMP, including its purpose, historical air quality progress in the South Coast, and the District's approach to air quality planning. Chapter 2, "Air Quality and Health Effects," discusses current air quality in comparison with federal health-based air pollution standards. Chapter 3, "Base Year and Future Emissions," summarizes emissions inventories, estimates current emissions by source and pollutant, and projects future emissions with and without growth. Chapter 4, "Control Strategy and Implementation," presents the control strategy, specific measures, and implementation schedules to attain the air quality standards by the specified attainment dates. Chapter 5, "Future Air Quality," describes the modeling approach used in the 2016 AQMP and summarizes the South Coast's future air quality projections with and without the control strategy. Chapter 6, "Federal and State Clean Air Act Requirements," discusses specific federal and state requirements as they pertain to the South Coast, including anti-backsliding requirements for revoked standards. Chapter 11, "Public Process and Participation," describes the District's public outreach effort associated with the development of the 2016 AQMP. A glossary is provided at the end of the document, presenting definitions of commonly used terms found in the 2016 AQMP.

The 2016 AQMP also includes the following technical appendices:

- Appendix I ("Health Effects") presents a summary of scientific findings on the health effects of ambient air pollutants.
- Appendix II ("Current Air Quality") contains a detailed summary of the air quality in 2015, along with prior year trends, in both the South Coast and the Coachella Valley.
- Appendix III ("Base and Future Year Emission Inventory") presents the 2012 base year emissions inventory and projected emission inventories of air pollutants in future attainment years for both annual average and summer planning inventories.
- Appendix IV–A ("SCAQMD's Stationary and Mobile Source Control Measures") describes SCAQMD's proposed stationary and mobile source control measures to attain the federal ozone and fine particulate matter $PM_{2.5}$ standards.
- Appendix IV–B ("CARB's Mobile Source Strategy") describes CARB's proposed 2016 strategy to attain health-based federal air quality standards.
- Appendix IV–C ("Regional Transportation Strategy and Control Measures") describes the Southern California Association of Governments' (SCAG) "Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy" and transportation control measures included in the 2016 $PM_{2.5}$ Plan.
- Appendix V ("Modeling and Attainment Demonstrations") provides the details of the regional modeling for the attainment demonstration.
- Appendix VI ("Compliance with Other Clean Air Act Requirements") provides the District's demonstration that the 2016 AQMP complies with specific CAA requirements.

As discussed in section III.D of this notice, the attainment demonstrations for the 1997 and 2008 ozone NAAQS in the 2016 AQMP rely on certain commitments made by CARB in the Revised Proposed 2016 State Strategy for the State Implementation Plan (March 7, 2017) ("2016 State Strategy"), which was also submitted on April 27, 2017. Since submittal of the 2016 AQMP, the District and CARB have updated and supplemented certain other elements of the 2016 AQMP (such as the RFP demonstration, contingency measure element, motor vehicle emissions budgets, and 1-hour ozone attainment demonstration) through SIP revision submittals dated December 5, 2018 and December 20, 2018, also discussed in section II.A of this notice.

2. CARB's 2016 State Strategy

On April 27, 2017, CARB submitted the 2016 State Strategy to the EPA as a revision to the California SIP.[26] The SIP revision for the 2016 State Strategy includes the main document itself plus CARB's resolution of adoption of the 2016 State Strategy (CARB Resolution 17–7) that includes commitments on which the 2016 State Strategy relies.[27]

CARB worked closely with the District in the development of the 2016 AQMP and anticipated the need to adopt State commitments to achieve aggregate emission reductions in the South Coast. The commitment in the 2016 State Strategy includes two components: (1) A commitment to bring to the CARB Board for consideration, or to otherwise take action on, certain defined new measures (*e.g.*, new California low-NO_X standards for on-road heavy-duty engines, low-emission diesel requirements for off-road equipment, and continued development of advanced technologies pursuant to CAA section 182(e)(5)), and (2) a commitment to achieve aggregate emissions reductions by specific dates. In the 2016 State Strategy, CARB made separate aggregate emissions reduction commitments for the South Coast and San Joaquin Valley.

On February 12, 2019, we approved CARB's commitment from the 2016 State Strategy for the 2008 ozone NAAQS attainment plan for the San Joaquin Valley.[28] In today's action, we are proposing approval of CARB's commitment from the 2016 State Strategy for the 2016 South Coast Ozone SIP. With respect to the South Coast, CARB's aggregate emissions reduction commitment amounts to 113 tons per day (tpd) of NO_X and 50 to 51 tpd of VOCs by 2023 to meet the 1997 ozone NAAQS, and 111 tpd of NO_X and 59 to 60 tpd of VOCs by 2031 to meet 2008 ozone NAAQS.[29]

3. CARB's 2018 Updates to the California State Implementation Plan

On December 5, 2018, CARB submitted the 2018 Updates to the California State Implementation Plan ("2018 SIP Update") to the EPA as a revision to the California SIP.[30] CARB adopted the 2018 SIP Update on October 25, 2018. CARB developed the 2018 SIP Update in response to the court's decision in *South Coast II* vacating the 2008 Ozone SRR with respect to the use of an alternate baseline year for demonstrating RFP and to address contingency measure requirements in the wake of the court decision in *Bahr* v. *EPA*.[31] The 2018 SIP

for clean air plans; Chapter 8, "Looking Beyond Current Requirements," assesses the South Coast's status with respect to the 2015 8-hour ozone standard of 0.070 ppm; Chapter 9, "Air Toxic Control Strategy," examines the ongoing efforts to reduce health risk from toxic air contaminants, co-benefits from reducing criteria pollutants, and potential future actions; and Chapter 10, "Climate and Energy," provides a description of current and projected energy demand and supply issues in the South Coast, and the relationship between air quality improvement and greenhouse gas mitigation goals. As noted previously, we are not taking action in this rulemaking on the portions of the 2016 AQMP that relate to the 2008 ozone NAAQS in Coachella Valley, which includes Chapter 7 ("Current and Future Air Quality—Desert Nonattainment Areas SIP") and the portions that relate to the $PM_{2.5}$ NAAQS in the South Coast.

[26] Letter dated April 27, 2017 from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX.

[27] CARB Board Resolution 17–7, 2016 State Strategy for the State Implementation Plan, March 23, 2017.

[28] 84 FR 3302 (February 12, 2019).

[29] Staff Report, ARB Review of the 2016 Air Quality Management Plan for the South Coast Air Basin and Coachella Valley, March 7, 2017; CARB Board Resolution 17–7, 2016 State Strategy for the State Implementation Plan, March 23, 2017.

[30] Letter dated December 5, 2018, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX.

[31] *Bahr* v. *EPA*, 836 F.3d 1218 (9th Cir. 2016) ("*Bahr* v. *EPA*"). In *Bahr* v. *EPA*, the court rejected the EPA's longstanding interpretation of CAA

Continued

Update includes an RFP demonstration using the required 2011 baseline year for the South Coast for the 2008 ozone NAAQS. The 2018 SIP Update also includes updated motor vehicle emission budgets and information to support the contingency measure element.

The 2018 SIP Update includes updates for 8 different California ozone nonattainment areas. We have already taken action to approve the San Joaquin Valley portion of the 2018 SIP Update,[32] and in today's document, we are taking action on the South Coast portion of the 2018 SIP Update. Also, to supplement the contingency measure element of the 2016 South Coast Ozone SIP, CARB forwarded a January 29, 2019 letter of commitment from the District.[33] In its letter, the District commits to modify an existing rule or adopt a new rule to create a contingency measure that will be triggered if the area fails to meet an RFP milestone for the 2008 ozone NAAQS.[34] In the February 13, 2019 letter, CARB commits to submit the revised District rule to the EPA as a SIP revision within 12 months of the final action on the EPA's final action on the RFP contingency measure element of the 2016 South Coast Ozone SIP.[35]

4. SCAQMD's Updated Attainment Demonstration for the 1-Hour Ozone NAAQS

On December 20, 2018, CARB submitted the Updated Federal 1979 1-Hour Ozone Standard Attainment Demonstration (November 2018) ("1-Hour Ozone Update") to the EPA as a revision to the California SIP.[36] The emissions inventories used for the 1997 and 2008 (8-hour) ozone attainment demonstrations in the 2016 AQMP reflect planning assumptions that were updated after the District had completed the 1-hour ozone attainment demonstration for the 2016 AQMP, and the District prepared the 1-Hour Ozone Update to align the attainment demonstration for the 1-hour ozone NAAQS with the attainment demonstrations in the 2016 AQMP for the 1997 and 2008 ozone NAAQS.

The 1-Hour Ozone Update includes an updated emissions inventory consistent with the final emissions inventory used for the 8-hour ozone attainment demonstrations in the 2016 AQMP, revised air quality modeling, and an updated attainment strategy that demonstrates attainment of the 1-hour ozone NAAQS by 2022 without the need for reductions from CAA section 182(e)(5) new technology measures. While the updated attainment demonstration for the 1-hour ozone NAAQS no longer relies on emissions reductions from the 2016 State Strategy or CAA section 182(e)(5) measures, it continues to rely on the District's commitment from the 2016 AQMP to achieve aggregate emissions reductions of 20.6 tpd of NO_X and 6.1 tpd of VOC by 2022.

5. SCAQMD's Rule 301 ("Permitting and Associated Fees")

On May 20, 2019, CARB requested that the EPA accept a public draft revision to District Rule 301 ("Permitting and Associated Fees") for parallel processing.[37] Under the EPA's parallel processing procedure, the EPA may propose action on a public draft version of a SIP revision but will take final action only after the state adopts and submits the final version to the EPA for approval.[38] If there are no significant changes from the public draft version of the SIP revision to the final version, the EPA may elect to take final action on the proposal. The draft revision was released for public review on May 17, 2019. In this case, it is anticipated that the District will adopt without significant modifications revised Rule 301 on July 12, 2019 and will submit the revised rule to CARB for adoption and submittal to the EPA as a revision to the California SIP. We are proposing our action based on the public draft version of revised Rule 301 submitted to us for parallel processing on May 20, 2019.

District Rule 301 includes a number of provisions related solely to fees, which are not required to be in the SIP, but, it also includes certain provisions (specifically, paragraphs (e)(1)(A) and (B), (e)(2), (e)(5) and (e)(8)) that require annual reporting of emissions of VOC and NO_X from certain stationary sources. The relevant provisions of District Rule 301 are intended by the District and CARB to address the emissions statement requirement in CAA section 182(a)(3)(B) for the South Coast for the 2008 ozone NAAQS. In this document, we are proposing action on the relevant portions of revised District Rule 301 based on the public draft version of the rule submitted to us for parallel processing on May 20, 2019.

B. Clean Air Act Procedural Requirements for Adoption and Submission of SIP Revisions

CAA sections 110(a) and 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submission of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and an opportunity for a public hearing was provided consistent with the EPA's implementing regulations in 40 CFR 51.102.

Both the District and CARB have satisfied the applicable statutory and regulatory requirements for reasonable public notice and hearing prior to the adoption and submittal of the SIP revisions that comprise the 2016 South Coast Ozone SIP. With respect to the 2016 AQMP, the District held six regional workshops from July 14 through July 21, 2016 to discuss the plan and solicit public input. On December 19 and 20, 2016, the District published notices in several local newspapers of a public hearing to be held on February 3, 2017, for the adoption of the 2016 AQMP.[39] On February 3, 2017, the District held the public hearing, and, through Resolution 17–2, adopted on March 3, 2017, the 2016 AQMP and directed the Executive Officer to forward the plan to CARB for inclusion in the California SIP.

CARB also provided public notice and opportunity for public comment on the 2016 AQMP. On March 6, 2017, CARB

section 172(c)(9) as allowing for early implementation of contingency measures. The court concluded that a contingency measure must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.

[32] 84 FR 11198 (March 25, 2019). In our March 25, 2019 final rule, the EPA approved Resolution 18–50 (adopting the 2018 SIP Update as a SIP revision), including Attachments A ("Covered Districts"), B ("Menu of Enhanced Enforcement Actions") and C ("Correction of Typographical Error"), chapter VIII ("SIP Elements for the San Joaquin Valley"), chapter X ("Contingency Measures") and Appendix A ("Nonattainment Area Inventories"), A–1, A–2 and A–27 through A–30, only.

[33] Letter dated February 13, 2019, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX.

[34] Letter dated January 29, 2019, from Wayne Nastri, SCAQMD Executive Officer, to Richard Corey, CARB Executive Officer. The District clarified its January 29, 2019 commitment in a letter dated May 2, 2019, from Wayne Nastri, SCAQMD Executive Officer, to Richard Corey, CARB Executive Officer. CARB forwarded the District's clarification to the EPA in a letter dated May 20, 2019, from Michael Benjamin, CARB, to Amy Zimpfer, EPA Region IX.

[35] Letter dated February 13, 2019, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX.

[36] Letter dated December 20, 2018, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX.

[37] Letter dated May 20, 2019, from Richard Corey, CARB Executive Officer, to Michael Stoker, Regional Administrator, EPA Region IX.

[38] See 40 CFR part 51, appendix V, section 2.3.

[39] Memorandum dated January 24, 2017, from Denise Garzaro, Clerk of the Boards, SCAQMD to Arlene Martinez, Administrative Secretary, Planning, Rule Development and Area Sources, SCAQMD. The memorandum includes copies of the proofs of publication of the notice for the February 3, 2017 public hearing.

released for public review its Staff Report for the 2016 AQMP and published a notice of public meeting to be held on March 23, 2017, to consider adoption of the 2016 AQMP.[40] On March 23, 2017, CARB held the hearing and adopted the 2016 AQMP as a revision to the California SIP, excluding those portions not required to be submitted to the EPA, and directed the Executive Officer to submit the 2016 AQMP to the EPA for approval into the California SIP.[41] On April 27, 2017, the Executive Officer of CARB submitted the 2016 AQMP to the EPA and included the transcript of the hearing held on March 23, 2017.[42] On October 23, 2017, the EPA determined that the portions of this submittal applicable to the 2008 ozone NAAQS were complete.[43]

With respect to the 2016 State Strategy, on May 17, 2016, CARB circulated for public review and comment the Proposed State Strategy, provided a 60-day comment period, and provided notice of a public hearing by its Board to be held on September 22, 2016. On March 7, 2017, in response to comments received during the public comment period and later during public workshops, and, based on Board direction provided to staff during the September 22, 2016 Board meeting, CARB released a Revised Proposed State Strategy. On March 23, 2017, through Resolution 17–7, CARB adopted the 2016 State Strategy following public hearing. On April 27, 2017, CARB submitted the 2016 State Strategy to the EPA as a revision to the California SIP.

With respect to the 2018 SIP Update, CARB also provided public notice and opportunity for public comment. On September 21, 2018, CARB released for public review the 2018 SIP Update and published a notice of public meeting to be held on October 23, 2018, to consider adoption of the 2018 SIP Update.[44] On October 23, 2018, through Resolution 18–50, CARB adopted the 2018 SIP Update. On December 5, 2018, CARB submitted the 2018 SIP Update to the EPA.

With respect to the 1-Hour Ozone Update, the District held a workshop on September 20, 2018. On October 3, 2018, the District published notices in several local newspapers for a public hearing to be held on November 2, 2018, for the adoption of the 1-Hour Ozone Update.[45] On November 2, 2018, the District held the public hearing, and, through Resolution 18–20, adopted the 1-Hour Ozone Update and directed the Executive Officer to forward the plan to CARB for inclusion in the California SIP. On November 9, 2018, CARB published a notice of public meeting to be held on December 5, 2018, to consider adoption of the 1-Hour Ozone Update.[46] On December 13, 2018, through Resolution 18–55, CARB adopted the 1-Hour Ozone Update, and on December 20, 2018, CARB submitted the 1-Hour Ozone Update to the EPA.

With respect to District Rule 301, by letter dated May 20, 2019, CARB submitted the public draft revision to District Rule 301 to the EPA with a request for parallel processing. The District is expected to adopt the revision on July 12, 2019, and to forward the rule (along with the necessary public process documentation) to CARB for approval and submittal to the EPA as a revision the California SIP.

Based on information provided in each of the SIP revisions summarized above, the EPA has determined that all hearings were properly noticed. Therefore, we find that the submittals of the 2016 AQMP, the 2016 State Strategy, the 2018 SIP Update, and the 1-Hour Ozone Update meet the procedural requirements for public notice and hearing in CAA sections 110(a) and 110(l) and 40 CFR 51.102. We anticipate receipt of all the necessary public process documentation for adoption of District Rule 301 when we receive the formal SIP submittal package from CARB.

III. Evaluation of the 2016 South Coast Ozone SIP

A. Emissions Inventories

1. Statutory and Regulatory Requirements

CAA sections 172(c)(3) and 182(a)(1) require states to submit for each ozone nonattainment area a "base year inventory" that is a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the area. In addition, the 2008 Ozone SRR requires that the inventory year be selected consistent with the baseline year for the RFP demonstration, which is the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under the Air Emissions Reporting Requirements.[47]

The EPA has issued guidance on the development of base year and future year emissions inventories for 8-hour ozone and other pollutants.[48] Emissions inventories for ozone must include emissions of VOC and NO_X and represent emissions for a typical ozone season weekday.[49] States should include documentation explaining how the emissions data were calculated. In estimating mobile source emissions, states should use the latest emissions models and planning assumptions available at the time the SIP is developed.[50]

Future baseline emissions inventories must reflect the most recent population, employment, travel and congestion estimates for the area. In this context, "baseline" emissions inventories refer to emissions estimates for a given year and area that reflect rules and regulations and other measures that are already adopted. Future baseline emissions inventories are necessary to show the projected effectiveness of SIP control measures. Both the base year and future year inventories are necessary for photochemical modeling to demonstrate attainment.

2. Summary of State's Submission

The 2016 AQMP includes base year (2012) and future year baseline inventories for NO_X and VOC for the South Coast ozone nonattainment area. Documentation for the inventories is found in Chapter 3 ("Base Year and Future Emissions") and Appendix III ("Base Year and Future Year Emission Inventory") of the 2016 AQMP. Because ozone levels in South Coast are typically higher from May through October, these

[40] Notice of Public Meeting to Consider Adopting the 2016 Air Quality Management Plan for Ozone and $PM_{2.5}$ for the South Coast Air Basin and the Coachella Valley signed by Richard Corey, Executive Officer, CARB, March 6, 2017.

[41] CARB Resolution 17–8, 10.

[42] Transcript of the March 23, 2017 Meeting of the State of California Air Resources Board.

[43] Letter dated October 23, 2017, from Matthew J. Lakin, Acting Director, Air Division, EPA Region IX to Richard Corey, Executive Officer, CARB.

[44] Notice of Public Meeting to Consider the 2018 Updates to the California State Implementation Plan signed by Richard Corey, Executive Officer, CARB, September 21, 2018.

[45] See proofs of publications dated October 3, 2018, from the Inland Daily Bulletin, Los Angeles Daily Journal, Orange County Reporter, The Press Enterprise, and San Bernardino Sun.

[46] Notice of Public Meeting to Consider the Proposed Revision to the South Coast 1-Hr Ozone State Implementation Plan signed by Richard Corey, Executive Officer, CARB, November 9, 2018.

[47] 2008 Ozone SRR at 40 CFR 51.1115(a) and the Air Emissions Reporting Requirements at 40 CFR part 51 subpart A.

[48] "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," EPA–454/B–17–002, May 2017. At the time the 2016 AQMP was developed, the following EPA emissions inventory guidance applied: "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" EPA–454–R–05–001, November 2005.

[49] 40 CFR 51.1115(a) and (c), and 40 CFR 51.1100(bb) and (cc).

[50] 80 FR 12264, at 12290 (March 6, 2015).

inventories represent average summer day emissions. The 2012 base year and future year inventories in the 2016 AQMP reflect District rules adopted prior to December 2015 and CARB rules adopted by November 2015. Both base year and projected future year inventories use the current EPA-approved version of California's mobile source emissions model, EMFAC2014, for estimating on-road motor vehicle emissions.[51]

VOC and NO_X emissions estimates in the 2016 AQMP are grouped into two general categories, stationary sources and mobile sources. Stationary sources are further divided into "point" and "area" sources. Point sources typically refer to permitted facilities and have one or more identified and fixed pieces of equipment and emissions points. Area sources consist of widespread and numerous smaller emission sources, such as small permitted facilities, households, and road dust. The mobile sources category is divided into two major subcategories, "on-road" and "off-road" mobile sources. On-road mobile sources include light-duty automobiles, light-, medium-, and heavy-duty trucks, and motorcycles. Off-road mobile sources include aircraft, locomotives, construction equipment, mobile equipment, and recreational vehicles.

For the 2016 AQMP, point source emissions for the 2012 base year emissions inventory are based on reported data from facilities using the District's annual emissions reporting program, which applies under District Rule 301 to stationary sources in the South Coast that emit more than 4 tons per year (tpy) or more of VOC or NO_X. Area sources include smaller emissions sources distributed across the nonattainment area. CARB and the District estimate emissions for about 400 area source categories using established inventory methods, including publicly-available emission factors and activity information. Activity data are derived from national survey data such as the Energy Information Administration or from local sources such as the Southern California Gas Company, paint suppliers, and District databases. Emission factors used for the estimates come from a number of sources including source tests, compliance reports, and the EPA's compilation of emissions factor document known as "AP–42."

On-road emissions inventories in the 2016 AQMP are calculated using CARB's EMFAC2014 model and the travel activity data provided by SCAG in "The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy."[52] CARB provided emissions inventories for off-road equipment, including construction and mining equipment, industrial and commercial equipment, lawn and garden equipment, agricultural equipment, ocean-going vessels, commercial harbor craft, locomotives, cargo handling equipment, pleasure craft, and recreational vehicles. CARB uses several models to estimate emissions for more than one hundred off-road equipment categories.[53] Aircraft emissions are developed in conjunction with the airports in the region. For the base year and future attainment year inventories, marine vessel emissions out to 100 nautical miles from the coastline are included.

Table 1 provides a summary of the District's 2012 base year and future attainment year baseline emissions estimates in tons per average summer day for NO_X and VOC. These inventories provide the basis for the control measure analysis and the attainment demonstrations in the 2016 AQMP. Based on the inventory for 2012, stationary and area sources currently account for roughly 40 percent of VOC emissions and 10 percent of the NO_X emissions in the South Coast while mobile sources account for roughly 60 percent of the VOC emissions and 90 percent of the NO_X emissions. For a more detailed discussion of the inventories, see Appendix III of the 2016 AQMP.

TABLE 1—SOUTH COAST BASE YEAR AND ATTAINMENT YEAR BASELINE EMISSIONS INVENTORIES

[Summer planning inventory, tpd]

Category	2012		2022		2023		2031	
	NO_X	VOC	NO_X	VOC	NO_X	VOC	NO_X	VOC
Stationary and Area Sources	65	211	50	220	50	220	50	231
On-Road Mobile Sources	293	162	117	71	88	68	65	49
Off-Road Mobile Sources	165	126	120	92	117	90	100	81
Total	522	500	287	383	255	379	214	362

Source: 2016 AQMP, Chapter 3, tables 3–2, 3–4B, 3–4C and 3–4E. The sum of the emissions values may not equal the total shown due to rounding of the numbers.

Future emissions forecasts in the 2016 AQMP are primarily based on demographic and economic growth projections provided by SCAG, the metropolitan planning organization (MPO) for the South Coast, and control factors developed by the District in reference to the 2012 base year. Growth factors used to project these baseline inventories are derived mainly from data obtained from SCAG.[54]

3. The EPA's Review of the State's Submission

We have reviewed the 2012 base year emissions inventory in the 2016 AQMP, and the inventory methodologies used by the District and CARB, for consistency with CAA requirements and EPA's guidance. First, as required by EPA regulation, we find that the 2012 inventory includes estimates for VOC and NO_X for a typical ozone season weekday, and that CARB has provided adequate documentation explaining how the emissions are calculated. Second, we find that the 2012 base year emissions inventory in the 2016 AQMP reflects appropriate emissions models and methodologies, and, therefore, represents a comprehensive, accurate, and current inventory of actual emissions during that year in the South Coast nonattainment area. Third, we

[51] 80 FR 77337 (December 14, 2015). EMFAC is short for EMission FACtor. The EPA announced the availability of the EMFAC2014 model for use in state implementation plan development and transportation conformity in California on December 14, 2015. The EPA's approval of the EMFAC2014 emissions model for SIP and conformity purposes was effective on the date of publication of the notice in the **Federal Register**.

[52] See *http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.*

[53] 2016 AQMP, Appendix III, page III–1–24.

[54] 2016 AQMP, Appendix III, page III–2–6.

find that selection of year 2012 for the base year emissions inventory is appropriate because it is consistent with the 2011 RFP baseline year (from the 2018 SIP Update) because both inventories are derived from a common set of models and methods. Lastly, although the requirement for a base year emissions inventory applies to the nonattainment area, we find that the inclusion of marine emissions out to 100 miles (*i.e.,* beyond the nonattainment area boundary, which lies 3 miles offshore) in the base year inventory to be appropriate given that such emissions must be accounted for in the ozone attainment demonstrations. Therefore, the EPA is proposing to approve the 2012 emissions inventory in the 2016 AQMP as meeting the requirements for a base year inventory set forth in CAA section 182(a)(1) and 40 CFR 51.1115.

With respect to future year baseline projections, we have reviewed the growth and control factors and find them acceptable and conclude that the future baseline emissions projections in the 2016 AQMP reflect appropriate calculation methods and the latest planning assumptions. Also, as a general matter, the EPA will approve a SIP revision that takes emissions reduction credit for a control measure only where the EPA has approved the measure as part of the SIP. Thus, to take credit for the emissions reductions from newly-adopted or amended District rules for stationary sources, the related rules must be approved by the EPA into the SIP. Table 2 in the technical support document (TSD) accompanying this rulemaking shows District rules with post-2012 compliance dates that were incorporated in the future year inventories, along with information on EPA approval of these rules, and shows that emissions reductions assumed by the 2016 AQMP for future years for stationary sources are supported by rules approved as part of the SIP. With respect to mobile sources, the EPA has taken action in recent years to approve CARB mobile source regulations into the California SIP.[55] We therefore find that the future year baseline projections in the 2016 AQMP are properly supported by SIP-approved stationary and mobile source measures.[56]

B. Emissions Statement

1. Statutory and Regulatory Requirements

Section 182(a)(3)(B)(i) of the Act requires states to submit a SIP revision requiring owners or operators of stationary sources of VOC or NO_X to provide the state with statements of actual emissions from such sources. Statements must be submitted at least every year and must contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. Section 182(a)(3)(B)(ii) of the Act allows states to waive the emissions statement requirement for any class or category of stationary sources that emit less than 25 tpy of VOC or NO_X, if the state provides an inventory of emissions from such class or category of sources as part of the base year or periodic inventories required under CAA sections 182(a)(1) and 182(a)(3)(A), based on the use of emission factors established by the EPA or other methods acceptable to the EPA.

The preamble of the 2008 Ozone SRR states that if an area has a previously approved emissions statement rule for the 1997 ozone NAAQS or the 1-hour ozone NAAQS that covers all portions of the nonattainment area for the 2008 ozone NAAQS, such rule should be sufficient for purposes of the emissions statement requirement for the 2008 ozone NAAQS.[57] The state should review the existing rule to ensure it is adequate and, if so, may rely on it to meet the emission statement requirement for the 2008 ozone NAAQS. Where an existing emission statement requirement is still adequate to meet the requirements of this rule, states can provide the rationale for that determination to the EPA in a written statement in the SIP to meet this requirement. States should identify the various requirements and how each is met by the existing emissions statement program. Where an emissions statement requirement is modified for any reason, states must provide the revision to the emissions statement as part of its SIP.

2. Summary of the State's Submission

The 2016 AQMP addresses compliance with the emissions statement requirement in CAA section 182(a)(3)(B) for the 2008 ozone NAAQS by reference to District Rule 301 ("Permitting and Associated Fees") that, among other things, requires emissions reporting from all stationary sources of NO_X and VOC greater than or equal to 4 tpy. On May 20, 2019, CARB submitted certain provisions from a public draft version of District Rule 301 to the EPA for parallel processing. Once adopted, the District will be forwarding the revised rule to CARB for adoption and submittal to the EPA as a revision to the California SIP.

3. The EPA's Review of the State's Submission

For this action, we have evaluated the public draft version of District Rule 301 (*i.e.,* the relevant portions of the rule—paragraphs (e)(1)(A) and (B), (e)(2), (e)(5) and (e)(8)), as submitted for parallel processing on May 20, 2019, for compliance with the specific requirements for emissions statements under CAA section 182(a)(3)(B).[58] We find that District Rule 301 (paragraphs (e)(1)(A) and (B), (e)(2), (e)(5) and (e)(8)) applies within the entire ozone nonattainment area; applies to all permit holders and to all equipment operating under permit; and requires reporting, on an annual basis, of total emissions of various air pollutants, including VOC and NO_X, if emissions of any one pollutant are equal to or greater than 4 tpy. Also, as required under CAA section 182(a)(3)(B), District Rule 301 requires certification that the information provided to the District is accurate to the best knowledge of the individual certifying the emissions data.

We also note that, while the emissions reporting requirements in District Rule 301 do not apply to permitted sources of emissions less than 4 tpy, such an exclusion is allowed under CAA section 182(a)(3)(B)(ii) so long as the state includes estimates of such class or category of stationary sources in base year emission inventories and periodic inventories submitted under CAA sections 182(a)(1) and 182(a)(3)(A), based on EPA emission factors or other

[55] See 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

[56] In August 2018, the U.S. Department of Transportation and the EPA published the proposed "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule" ("SAFE rule") that, among other things, proposes to withdraw the EPA's 2013 waiver of preemption for CARB's Zero Emissions Vehicle (ZEV) mandate and Greenhouse Gas (GHG) standards that are applicable to new model year 2021 through 2025 light-duty vehicles. See 83 FR 42986 (August 24, 2018) and 78 FR 2112 (January 9, 2013). The baseline emissions projections in the 2016 South Coast Ozone SIP assume implementation of the ZEV mandate and GHG standards. In its comments on the SAFE proposal, CARB estimates an emission increase of 1.2 tons per day of NO_X in the South Coast if the SAFE rule is finalized. See "Analysis in Support of Comments of the California Air Resources Board on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks," CARB, October 26, 2018. At this time, we cannot predict the date of final action on the SAFE rule, nor can we pre-judge the outcome of the final rule. This proposed action reflects the emissions projections in the 2016 South Coast Ozone SIP. If the SAFE rule is finalized prior to our final rulemaking on the 2016 South Coast Ozone SIP, we will evaluate and address, as appropriate, the impact of the final SAFE rule on our proposed action.

[57] See 80 FR 12264, at 12291 (March 6, 2015).

[58] District Rule 301 covers a wide array of fees and is over 90 pages long. We are proposing action only on those few sections of the rule that are relevant to the emissions statement requirement.

methods acceptable to the EPA. We recognize that emissions inventories developed by the SCAQMD for the South Coast routinely include actual emissions estimates for all stationary sources or classes or categories of such sources, including those emitting less than 4 tpy, and that such inventories provide the basis for inventories submitted to meet the requirements of CAA sections 182(a)(1) and 182(a)(3)(A). By approval of emission inventories as meeting the requirements of CAA sections 182(a)(1) and 182(a)(3)(A), the EPA is implicitly accepting the methods and factors used by the SCAQMD to develop those emission estimates. Our most recent approval of a base year emission inventory for the South Coast is found at 77 FR 12674 (March 1, 2012) (approval of base year emission inventory for the 1997 ozone NAAQS). In addition, we are proposing approval of the base year inventory for the 2008 ozone NAAQS in this action.

Therefore, for the reasons described in the preceding paragraphs, we propose to approve the public draft version of District Rule 301 (paragraphs (e)(1)(A) and (B), (e)(2), (e)(5) and (e)(8)) as meeting the emissions statement requirements under CAA section 182(a)(3)(B). We will not take final action on District Rule 301 until we receive the formal SIP submittal package from CARB including the final adopted version of the relevant portions of the rule.

C. Reasonably Available Control Measures Demonstration and Control Strategy

1. Statutory and Regulatory Requirements

CAA section 172(c)(1) requires that each attainment plan provide for the implementation of all RACM as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through implementation of reasonably available control technology), and also provide for attainment of the NAAQS. The 2008 Ozone SRR requires that, for each nonattainment area required to submit an attainment demonstration, the state concurrently submit a SIP revision demonstrating that it has adopted all RACM necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements.[59]

The EPA has previously provided guidance interpreting the RACM requirement in the General Preamble for the Implementation of the Clean Air Act Amendments of 1990 and in a memorandum entitled "Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas." [60] In short, to address the requirement to adopt all RACM, states should consider all potentially reasonable control measures for source categories in the nonattainment area to determine whether they are reasonably available for implementation in that area and whether they would, if implemented individually or collectively, advance the area's attainment date by one year or more.[61] Any measures that are necessary to meet these requirements that are not already either federally promulgated, or part of the state's SIP, must be submitted in enforceable form as part of the state's attainment plan for the area.[62]

2. Summary of the State's Submission

For the 2016 South Coast Ozone SIP, the District, CARB, and SCAG each undertook a process to identify and evaluate potential RACM that could contribute to expeditious attainment of the 2008 ozone NAAQS in the South Coast. We describe each agency's efforts below.

a. District's RACM Analysis

The District's RACM demonstration for the 2008 ozone NAAQS focuses on stationary and area source controls, and it is described in Appendix VI–A ("Reasonably Available Control Measures (RACM)/Best Available Control Measures (BACM) Demonstration") of the 2016 AQMP. Appendix VI–A contains analyses of all potential control measures for emission reduction opportunities, as well as economic and technological feasibility.

As a first step in the RACM analysis, the District prepared a detailed inventory of emissions sources that emit VOC and NO_X to identify source categories from which emissions reductions would effectively contribute to attainment. Details on the methodology and development of the emission inventory are discussed in chapter 3 and appendix III of the 2016 AQMP. A total of 76 source categories are included in the base year emission inventory, 46 represent stationary and area sources and 30 for mobile sources.[63]

The District's RACM analysis builds upon a foundation of District rules developed for earlier ozone plans and approved as part of the SIP. We provide a list of the District's NO_X and VOC rules approved into the California SIP in Table 1 of our TSD for this proposed action. The 86 SIP-approved District VOC or NO_X rules listed in Table 1 of our TSD establish emission limits or other types of emissions controls for a wide range of sources, including use of solvents, refineries, gasoline storage, architectural coatings, spray booths, various types of commercial coatings, boilers, steam generators and process heaters, oil and gas production well, marine tank vessel operations, and many more. These rules have already provided significant and ongoing reductions toward attainment of the 2008 ozone NAAQS by 2031.

To demonstrate that the SCAQMD considered all candidate measures that are available and technologically and economically feasible, the District conducted a six-step analysis, as described below.

Step 1. 2015 Air Quality Technology Symposium ("2015 Symposium").

The 2015 Symposium was held on June 10 and 11, 2015, with participation of technical experts and the public to solicit new and innovative concepts to assist in attaining the 1997 and 2008 ozone NAAQS by the applicable attainment dates. The SCAQMD also conducted an extensive outreach to engage a wide range of stakeholders in the process.

[59] 40 CFR 51.1112(c).

[60] See General Preamble, 57 FR 13498 at 13560 (April 16, 1992) and memorandum dated November 30, 1999, from John Seitz, Director, OAQPS, to Regional Air Directors, titled "Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas."

[61] Id. See also 44 FR 20372 (April 4, 1979), and memorandum dated December 14, 2000, from John S. Seitz, Director, OAQPS, to Regional Air Directors, titled "Additional Submission on RACM From States with Severe One-Hour Ozone Nonattainment Area SIPs."

[62] For ozone nonattainment areas classified as Moderate or above, CAA section 182(b)(2) also requires implementation of reasonably available control technology (RACT) for all major sources of VOC and for each VOC source category for which the EPA has issued a control techniques guideline. CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_X. In Extreme areas, a major source is a stationary source that emits or has the potential to emit at least 10 tpy of VOC or NO_X (see CAA section 182(e) and (f)). Under the 2008 Ozone SRR, states were required to submit SIP revisions meeting the RACT requirements of CAA sections 182(b)(2) and 182(f) no later than 24 months after the effective date of designation for the 2008 Ozone NAAQS and to implement the required RACT measures as expeditiously as practicable but no later than January 1 of the 5th year after the effective date of designation (see 40 CFR 51.1112(a)). California submitted the CAA section 182 RACT SIP for the South Coast on July 18, 2014, and the EPA fully approved this submission at 82 FR 43850 (September 20, 2017).

[63] 2016 AQMP, Appendix VI–A, Table VI–A–3.

Step 2. Reasonably Available Control Technology/Best Available Control Technology Analysis.[64]

The District's Reasonably Available Control Technology/Best Available Control Technology (RACT/BACT) analysis found four VOC or NO_X SCAQMD rules (*i.e.*, District Rules 462 ("Organic Liquid Loading"), 1115 ("Motor Vehicle Assembly Line Coating Operations"), 1118 ("Control of Emissions from Refinery Flares") and 1138 ("Control of Emissions from Restaurant Operations")) that are less stringent than EPA control techniques guidelines or analogous rules in other air districts. The SCAQMD evaluated the rules as candidate potential measures.

Step 3. EPA TSDs.

The District researched TSDs from recent EPA rulemakings on South Coast rules for EPA recommendations on potential control measures. The TSD for EPA's action on South Coast Rule 1125, "Metal Container, Closure, and Coil Coating Operations" (amended March 7, 2008) was the only applicable and recent TSD that met the criteria for review.

Step 4. Control measures in other areas.

The District reviewed control measures in other areas (*i.e.*, Ventura County, San Francisco Bay Area, San Joaquin Valley, Sacramento Metropolitan, Dallas-Fort Worth and Houston-Galveston-Brazoria, New York, and New Jersey) to evaluate whether control technologies available and cost-effective within other areas would be available and cost-effective for use in the South Coast.

Step 5. Control Measures beyond RACM in 2012 AQMP.

The District updated the RACM analysis for four control measures that were determined to be beyond RACM in the analysis for the prior 2012 AQMP, including reconsideration of emission reductions of VOC from greenwaste composting.

Step 6. EPA Menu of Control Measures.

The Menu of Control Measures (MCM)[65] compiled by the EPA's Office of Air Quality Planning and Standards was created to provide information useful in the development of emission reduction strategies and to identify and evaluate potential control measures. District staff reviewed the MCM for point and nonpoint sources of NO_X and VOC.

The District provides a comprehensive evaluation of its RACM control strategy in Appendix VI–A of the 2016 AQMP. The evaluation includes the following: Description of the sources within the category or sources subject to the rule; base year and projected baseline year emissions for the source category affected by the rule; discussion of the current requirements of the rule; and discussion of potential additional control measures, including, in many cases, a discussion of the technological and economic feasibility of the additional control measures. This includes comparison of each District rule to analogous control measures adopted by other agencies.

Based on its RACM analysis for stationary and area sources under its jurisdiction, the District identified the following three additional RACM with quantifiable VOC and NO_X emission reductions: CMB–02—Emission Reductions from Replacement with Zero or Near-Zero NO_X Appliances in Commercial and Residential Applications; CMB–03—Emission Reductions from Non-Refinery Flares; and BCM–10—Emission Reductions from Greenwaste Composting. These three RACM are included in the District's stationary source measures in Table 4–2 of the 2016 AQMP that the District Board adopted through Resolution 17–2. The District estimates that the three RACM measures, once adopted and implemented, will reduce VOC emissions by 1.9 tpd by 2022 and 2023 and by 2.2 tpd by 2031, and will reduce NO_X emissions by 2.5 tpd by 2022 and 2023 and by 4.3 tpd 2031. See tables 4–9, 4–10 and 4–11 of the 2016 AQMP. As to the few remaining measures that the District rejected from its RACM analysis, the District determined that these measures would not collectively advance the attainment date or contribute to RFP due to the uncertain or non-quantifiable emissions reductions they would potentially generate.[66]

Based on its evaluation of all available measures, the District concludes that the District's existing rules are generally as stringent as, or more stringent than the analogous rules in other districts. Further, the District concludes that, based on its comprehensive review and evaluation of potential candidate measures and the adoption of commitments to implement the three measures determined to be technologically and economically feasible, the District meets the RACM requirement for the 2008 ozone NAAQS for all sources under the District's jurisdiction.

b. Local Jurisdictions' RACM Analysis and Transportation Control Measures

Appendix IV–C, Regional Transportation Strategy and Control Measures, of the 2016 AQMP, contains the transportation control measures (TCMs) RACM component for the 2016 South Coast Ozone SIP. SCAG, the MPO for the South Coast region, conducted the local jurisdictions' TCM RACM analysis, which is based on SCAG's Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) and 2015 Federal Transportation Improvement Program (FTIP) as amended. The 2016 RTP/SCS and FTIP were developed in consultation with federal, state and local transportation and air quality planning agencies and other stakeholders. The four county transportation commissions[67] in the South Coast were involved in the development of the regional transportation measures in Appendix IV–C.[68]

For the TCM RACM analysis, SCAG compared the list of measures implemented within the South Coast with those implemented in other ozone and $PM_{2.5}$ nonattainment areas.[69] SCAG then organized measures, including candidate measures and those measures currently implemented in the region, according to the sixteen categories specified in section 108(f)(1)(A) of the CAA. SCAG found a small number of candidate measures that were not currently implemented in the region and not included in the prior 2012 AQMP TCM RACM analysis. Attachment A ("Committed Transportation Control Measures (TCMs)") to Appendix IV–C of the 2016 AQMP lists the TCM projects that are specifically identified and committed to in the 2016 AQMP. The complete listing of all candidate measures evaluated for the RACM determination is included in Attachment B ("2016 South Coast AQMP Reasonably Available Control Measures (RACM) Analysis—TCMs") to

[64] BACM, including BACT, is a requirement for certain $PM_{2.5}$ nonattainment areas. BACM is not a requirement for ozone nonattainment areas, but because the District addresses both $PM_{2.5}$ and ozone in its 2016 AQMP, the District prepared an analysis that addresses both RACT and BACT.

[65] EPA, MCM, *http://www3.epa.gov/ttn/naaqs/pdfs/MenuOfControlMeasures.pdf.*

[66] See 2016 AQMP, Appendix VI–A, page VI–A–40, and Attachments VI–A–1c, VI–A–1d, and VI–A–2.

[67] Los Angeles County Metropolitan Transportation Authority, Riverside County Transportation Commission, Orange County Transportation Authority, and the San Bernardino County Transportation Authority (formerly known as the San Bernardino Associated Governments).

[68] Appendix IV–C, page IV–C–1.

[69] The specific nonattainment area SIPs that were reviewed for candidate TCMs are listed in Table 8 of Appendix IV–C of the 2016 AQMP.

Appendix IV–C of the 2016 AQMP. Based on its comprehensive review of TCM projects in other nonattainment areas or otherwise identified, SCAG determined that the TCMs being implemented in the South Coast are inclusive of all RACM.[70]

c. CARB's RACM Analysis

CARB's RACM analysis is contained in Attachment VI–A–3 ("California Mobile Source Control Program Best Available Control Measures/Reasonably Available Control Measures Assessment") ("BACM/RACM Assessment") to Appendix VI–A of the 2016 AQMP. CARB's BACM/RACM assessment provides a general description of CARB's existing mobile source programs. A more detailed description of CARB's mobile source control program, including a comprehensive table listing on- and off-road mobile source regulatory actions taken by CARB since 1985, is contained in Attachment VI–C–1 to Appendix VI–C of the 2016 AQMP. The BACM/RACM assessment and 2016 State Strategy collectively contain CARB's evaluation of mobile source and other statewide control measures that reduce emissions of NO_X and VOC in the South Coast. The 2016 State Strategy includes a commitment consisting of two components: A commitment to bring to the CARB Board, or otherwise take action on, certain defined new measures; and a commitment to achieve aggregate emissions reductions by specific dates.[71]

Source categories for which CARB has primary responsibility for reducing emissions in California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. CARB developed its 2016 State Strategy through a multi-step measure development process, including extensive public consultation, to develop and evaluate potential strategies for mobile source categories under CARB's regulatory authority that could contribute to expeditious attainment of the standard.[72] Through the process of developing the 2016 State Strategy, CARB identified certain defined measures as available to achieve additional VOC and NO_X emissions reductions from sources under CARB jurisdiction, including tighter requirements for new light- and medium-duty vehicles (referred to as the "Advanced Clean Cars 2" measure), a low-NO_X engine standard for vehicles with new heavy-duty engines, tighter emissions standards for small off-road engines, and more stringent requirements for consumer products, among others.[73] In adopting the 2016 State Strategy, CARB commits to bringing the defined measures to the CARB Board for action according to the specific schedule included as part of the strategy.[74]

Given the need for substantial emissions reductions from mobile and area sources to meet the NAAQS in California nonattainment areas, CARB has been a leader in the development of stringent control measures for on-road and off-road mobile sources and the fuels that power them. California has unique authority under CAA section 209 (subject to a waiver by the EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines, and new and in-use off-road vehicles and engines.

Historically, the EPA has allowed California to take into account emissions reductions from CARB regulations for which the EPA has issued waiver or authorizations under CAA section 209, notwithstanding the fact that these regulations have not been approved as part of the California SIP. However, in response to the decision by the United States Court of Appeals for the Ninth Circuit ("Ninth Circuit") in *Committee for a Better Arvin* v. *EPA*, the EPA has since approved mobile source regulations for which waiver authorizations have been issued as revisions to the California SIP.[75]

CARB's mobile source program extends beyond regulations that are subject to the waiver or authorization process set forth in CAA section 209 to include standards and other requirements to control emissions from in-use heavy-duty trucks and buses, gasoline and diesel fuel specifications, and many other types of mobile sources. Generally, these regulations have been submitted and approved as revisions to the California SIP.[76]

In the BACM/RACM Assessment, CARB concludes that, in light of the extensive public process culminating in the 2016 State Strategy, with the current mobile source program and proposed measures included in the 2016 State Strategy, there are no additional RACM that would advance attainment of the 2008 ozone NAAQS in the South Coast. As a result, CARB concludes that California's mobile source programs fully meet the RACM requirement.[77]

3. The EPA's Review of the State's Submission

As described above, the District already implements many rules to reduce VOC and NO_X emissions from stationary sources in the South Coast. For the 2016 AQMP, the District evaluated a range of potentially available measures and committed to adopt certain additional measures it found to be reasonably available for implementation in the South Coast nonattainment area (specifically, control measures CMB–02, CMB–03 and BCM–10). We find that the process followed by the District in the 2016 AQMP to identify additional RACM is generally consistent with the EPA's recommendations in the General Preamble, that the District's evaluation of potential measures to be appropriate, and that the District has provided reasoned justifications for rejection of measures deemed not reasonably available.

With respect to mobile sources, CARB's current program addresses the full range of mobile sources in the South Coast through regulatory programs for both new and in-use vehicles. Moreover, we find that the process conducted by CARB to prepare the 2016 State Strategy was reasonably designed to identify additional available measures within CARB's jurisdiction, and that CARB has adopted those measures that are reasonably available (such as the low-NO_X heavy-duty engine standard, among others). With respect to TCMs, we find that SCAG's process for identifying additional TCM RACM and conclusion that the TCMs being implemented in the South Coast (*i.e.*, the TCMs listed in Attachment A to Appendix IV–C of the 2016 AQMP) are inclusive of all TCM RACM to be reasonably justified and supported.

Based on our review of these RACM analyses and the District's and CARB's adopted rules, as well as the District's and CARB's commitments in the 2016 AQMP and 2016 State Strategy, respectively, to adopt and implement

[70] Appendix IV–C, page IV–C–30.

[71] 2016 State Strategy, Chapter 3 ("Proposed SIP Commitment"), 26.

[72] Appendix VI–A, Attachment VI–A–3, page VI–A–102.

[73] 2016 State Strategy, chapter 4 ("State SIP Measures").

[74] CARB Resolution 17–7 (dated March 23, 2017), 7.

[75] See, *e.g.*, 81 FR 39424 (June 16, 2016), 82 FR 14447 (March 21, 2017), and 83 FR 8404 (February 27, 2018). See also *Committee for a Better Arvin*, 786 F.3d 1169 (9th Cir. 2015).

[76] See, *e.g.*, the EPA's approval of standards and other requirements to control emissions from in-use heavy-duty diesel-powered trucks, at 77 FR 20308 (April 4, 2012), revisions to the California on-road reformulated gasoline and diesel fuel regulations at 75 FR 26653 (May 12, 2010), and revisions to the California motor vehicle inspection and maintenance program at 75 FR 38023 (July 1, 2010).

[77] Appendix VI–A, Attachment VI–A–3, page VI–A–106.

additional control measures, we propose to find that there are, at this time, no additional RACM (including RACT) that would advance attainment of the 2008 ozone NAAQS in the South Coast. For the foregoing reasons, we propose to find that the 2016 South Coast Ozone SIP provides for the implementation of all RACM as required by CAA section 172(c)(1) and 40 CFR 51.1112(c).

D. Attainment Demonstration

1. Statutory and Regulatory Requirements

An attainment demonstration consists of: (1) Technical analyses, such as base year and future year modeling, to locate and identify sources of emissions that are contributing to violations of the ozone NAAQS within the nonattainment area (*i.e.,* analyses related to the emission inventory for the nonattainment area and the emissions reductions necessary to attain the standard); (2) a list of adopted measures (including RACT controls) with schedules for implementation and other means and techniques necessary and appropriate for demonstrating RFP and attainment as expeditiously as practicable but no later than the outside attainment date for the area's classification; (3) a RACM analysis; and (4) contingency measures required under sections 172(c)(9) and 182(c)(9) of the CAA that can be implemented without further action by the state or the EPA to cover emissions shortfalls in RFP plans and failures to attain.[78] This subsection of today's proposed rule addresses the first two components of the attainment demonstration—the technical analyses and a list of adopted measures. Section III.C (Reasonably Available Control Measures Demonstration and Control Technology) of this document addresses the RACM component, and section III.G (Contingency Measures) addresses the contingency measures component of the attainment demonstration in the 2016 South Coast Ozone SIP.

With respect to the technical analyses, section 182(c)(2)(A) of the CAA requires that a plan for an ozone nonattainment area classified Serious or above include a "demonstration that the plan . . . will provide for attainment of the ozone [NAAQS] by the applicable attainment date. This attainment demonstration must be based on photochemical grid modeling or any other analytical method determined . . . to be at least as effective." The attainment demonstration predicts future ambient concentrations for comparison to the NAAQS, making use of available information on measured concentrations, meteorology, and current and projected emissions inventories of ozone precursors, including the effect of control measures in the plan.

Areas classified Extreme for the 2008 ozone NAAQS must demonstrate attainment as expeditiously as practicable, but no later than 20 years after the effective date of designation to nonattainment. The South Coast was designated nonattainment effective July 20, 2012, and the area must demonstrate attainment of the standards by July 20, 2032.[79] An attainment demonstration must show attainment of the standards for a full calendar year before the attainment date, so in practice, Extreme nonattainment areas must demonstrate attainment in 2031.

The EPA's recommended procedures for modeling ozone as part of an attainment demonstration are contained in "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze" ("Modeling Guidance").[80] The Modeling Guidance includes recommendations for a modeling protocol, model input preparation, model performance evaluation, use of model output for the numerical NAAQS attainment test, and modeling documentation. Air quality modeling is performed using meteorology and emissions from a base year, and the predicted concentrations from this base case modeling are compared to air quality monitoring data from that year to evaluate model performance.

Once the model performance is determined to be acceptable, future year emissions are simulated with the model. The relative (or percent) change in modeled concentration due to future emissions reductions provides a Relative Response Factor (RRF). Each monitoring site's RRF is applied to its monitored base year design value to provide the future design value for comparison to the NAAQS. The Modeling Guidance also recommends supplemental air quality analyses, which may be used as part of a Weight of Evidence (WOE) analysis. A WOE analysis corroborates the attainment demonstration by considering evidence other than the main air quality modeling attainment test, such as trends and additional monitoring and modeling analyses.

The Modeling Guidance also does not require a particular year to be used as the base year for 8-hour ozone plans.[81] The Modeling Guidance states that the most recent year of the National Emissions Inventory may be appropriate for use as the base year for modeling, but that other years may be more appropriate when considering meteorology, transport patterns, exceptional events, or other factors that may vary from year to year.[82] Therefore, the base year used for the attainment demonstration need not be the same year used to meet the requirements for emissions inventories and RFP.

With respect to the list of adopted measures, CAA section 172(c)(6) requires that nonattainment area plans include enforceable emission limitations, and such other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for timely attainment of the NAAQS.[83] Under the 2008 Ozone SRR, all control measures needed for attainment must be implemented no later than the beginning of the attainment year ozone season.[84] The attainment year ozone season is defined as the ozone season immediately preceding a nonattainment area's maximum attainment date.[85]

2. Summary of the State's Submission

a. Photochemical Modeling

The 2016 South Coast Ozone SIP updates the photochemical modeling for the 1-hour ozone NAAQS and the 1997 ozone NAAQS and includes photochemical modeling for the 2008 ozone NAAQS. The SCAQMD performed the air quality modeling for the 2016 South Coast Ozone SIP. The modeling relies on a 2012 base year and demonstrates attainment of the 1-hour ozone NAAQS in 2022, the 1997 ozone NAAQS in 2023, and the 2008 ozone NAAQS in 2031.

[78] 78 FR 34178, at 34184 (June 6, 2013) (proposed rule for implementing the 2008 ozone NAAQS).

[79] 80 FR 12264.

[80] Modeling Guidance, December 2014 Draft, EPA OAQPS; available at *https://www.epa.gov/scram/state-implementation-plan-sip-attainment-demonstration-guidance.* The 2014 modeling guidance updates, but is largely consistent with, the earlier "Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8-Hour Ozone and $PM_{2.5}$ NAAQS and Regional Haze," EPA–454/B–07–002, April 2007. Additional EPA modeling guidance can be found in 40 CFR 51 Appendix W, "Guideline on Air Quality Models," 82 FR 5182 (January 17, 2017); available at *https://www.epa.gov/scram/clean-air-act-permit-modeling-guidance.*

[81] Modeling Guidance at section 2.7.1.

[82] Ibid.

[83] See also CAA section 110(a)(2)(A).

[84] 40 CFR 51.1108(d).

[85] 40 CFR 51.1100(h).

As a general matter, the modeling for the 2016 South Coast Ozone SIP represents an update to the photochemical modeling performed for the EPA-approved 2012 AQMP to account for more recent satellite-based input data, improved chemical gaseous and particulate mechanisms, improved computational resources and post-processing utilities, enhanced spatial and temporal allocations of the emissions inventory, and a revised attainment demonstration methodology. The modeling and modeled attainment demonstration are described in Chapter 5 ("Future Air Quality") of the 2016 AQMP and in the 1-Hour Ozone Update. Appendix V ("Modeling and Attainment Demonstration") of the 2016 AQMP provides a description of model input preparation procedures, various model configuration options, and model performance statistics. The modeling protocol is in Chapter 2 ("Modeling Protocol") of Appendix V of the 2016 AQMP and contains all the elements recommended in the Modeling Guidance. Those include: Selection of model, time period to model, modeling domain, and model boundary conditions and initialization procedures; a discussion of emissions inventory development and other model input preparation procedures; model performance evaluation procedures; selection of days; and other details for calculating RRFs. Appendix V of the 2016 AQMP provides the coordinates of the modeling domain and thoroughly describes the development of the modeling emissions inventory, including its chemical speciation, its spatial and temporal allocation, its temperature dependence, and quality assurance procedures.

The modeling analysis used version 5.0.2 of the Community Multiscale Air Quality (CMAQ) photochemical model, developed by the EPA. To prepare meteorological input for CMAQ, the Weather and Research Forecasting model version 3.6 (WRF) from the National Center for Atmospheric Research was used. CMAQ and WRF are both recognized in the Modeling Guidance as technically sound, state-of-the-art models. The areal extent and the horizontal and vertical resolution used in these models were adequate for modeling South Coast ozone.

The WRF meteorological model results and performance statistics are described in Chapter 3 ("Meteorological Modeling and Sensitivity Analyses") of Appendix V. The District evaluated the performance of the WRF model through a series of simulations and concluded that the daily WRF simulation for 2012 provided representative meteorological fields that well characterized the observed conditions. The District's conclusions were supported by hourly time series graphs of wind speed, direction, and temperature for the South Coast included as Attachment 1 ("WRF Model Performance Time Series") to Appendix V.

Ozone model performance statistics are described in the 2016 AQMP Appendix V, Chapter 5 ("8-Hour Ozone Attainment Demonstration") and Chapter 8 ("1-Hour Ozone Attainment Demonstration"), which include tables of statistics recommended in the Modeling Guidance for 8-hour and 1-hour daily maximum ozone for the South Coast sub-regions (including the coastal, San Fernando, foothills, urban source, urban receptor, and Coachella Valley zones). Hourly time series are presented as well as density scatter plots, and plots of bias against concentration. Note that, because only relative changes are used from the modeling, the underprediction of absolute ozone concentrations does not mean that future concentrations will be underestimated.

After model performance for the 2012 base case was accepted, the model was applied to develop RRFs for the attainment demonstration. This entailed running the model with the same meteorological inputs as before, but with adjusted emissions inventories to reflect the expected changes between 2012 and the 2022, 2023, and 2031 attainment years. The base year or "reference year" modeling inventory was the same as the inventory for the modeling base case. The 2022, 2023, and 2031 inventory projects the base year into the future by including the effect of economic growth and emissions control measures. The set of 153 days from May 1 through September 30, 2012 was simulated and analyzed to determine daily 1-hour average and 8-hour average maximum ozone concentrations for the 2012, 2022, 2023, and 2031 emissions inventories. To develop the RRFs for the two 8-hour ozone NAAQS, only the top 10 days were used, consistent with EPA guidance; for the 1-hour ozone NAAQS, only the top 3 days were used.

The Modeling Guidance addresses attainment demonstrations with ozone NAAQS based on 8-hour averages but does not address attainment demonstrations for the 1-hour ozone NAAQS. For the 1997 and 2008 ozone NAAQS, the 2016 AQMP carried out the attainment test procedure consistent with the Modeling Guidance. For the 1-hour ozone NAAQS, the District adapted the procedures from the Modeling Guidance with certain modifications intended to address the differences between the form of the 1-hour ozone NAAQS (*i.e.,* expected number of exceedances of the 1-hour ozone NAAQS) and the form of the 8-hour ozone standards (fourth highest daily maximum 8-hour average). The RRFs were calculated as the ratio of future to base year concentrations. The resulting RRFs were then applied to 2012 weighted base year design values [86] for each monitor to arrive at 2022, 2023, and 2031 future year design values.[87] The highest 2022 ozone design value is 0.123 ppm at the Fontana site; this value demonstrates attainment of the 1-hour ozone NAAQS of 0.12 ppm. For the 1997 ozone NAAQS, the 2023 ozone design value is 0.084 ppm also at the Fontana site; this value demonstrates attainment with the corresponding 1997 ozone NAAQS of 0.085 ppm. The highest 2031 ozone design value is 0.075 ppm also at the Fontana site; this value demonstrates attainment of the corresponding 2008 ozone NAAQS of 0.075 ppm.

The 2016 AQMP modeling includes a weight of evidence demonstration, based on a model performance evaluation of the temporal profile of on-road mobile source emissions and spatial surrogate profiles of area emissions.[88] The 1-Hour Ozone Update includes a weight of evidence demonstration for the 1-hour ozone NAAQS.[89] The demonstration is based on a sensitivity analysis of four scenarios of emission reductions.

Finally, the 2016 AQMP includes an "Unmonitored Area Analysis" for the 8-hour ozone NAAQS to assess the attainment status of locations other than monitoring sites.[90] The Modeling Guidance describes a "gradient adjusted spatial fields" procedure along with the EPA software (*i.e.,* Modeled Attainment Test Software) used to carry it out.[91] The 2016 AQMP and 1-Hour Ozone Update show concentrations below the NAAQS for all locations.[92] This analysis adds assurance to the attainment demonstrations that all locations in the

[86] The Modeling Guidance recommends that RRFs be applied to the average of three three-year design values centered on the base year, in this case the design values for 2010–2012, 2011–2013, and 2012–2014. This amounts to a 5-year weighted average of individual year 4th high concentrations, centered on the base year of 2012, and so is referred to as a weighted design value.

[87] 2016 AQMP, Table 5–2; 1-Hour Ozone Update, Table 4.

[88] Appendix V of 2016 AQMP, pages V–5–36—V–5–41.

[89] 1-Hour Ozone Update, 12.

[90] Appendix V of 2016 AQMP, pages V–5–28—V–5–35.

[91] Modeling Guidance, section 4.7.

[92] 2016 Ozone Plan, Figure 5–7, and 1-Hour Ozone Update, Figure 3.

South Coast will attain the 1-hour ozone NAAQS by 2022, the 1997 ozone NAAQS by 2023, and the 2008 ozone NAAQS by 2031.

b. Control Strategy for Attainment

The control strategy for attainment of the 1-hour ozone NAAQS, the 1997 ozone NAAQS, and the 2008 ozone NAAQS in the 2016 South Coast Ozone SIP relies on emissions reductions from already-adopted measures, commitments by the District to certain regulatory and nonregulatory initiatives and aggregate emission reductions, and commitments by CARB to certain regulatory and nonregulatory initiatives and aggregate emission reductions. Generally, the bulk of the emissions reductions on which the control strategies rely is expected to come from already-adopted measures, which are discussed in section III.C of this document. For the 1-hour ozone NAAQS, 1997 ozone NAAQS, and the 2008 ozone NAAQS, already-adopted measures are expected to achieve approximately 92 percent, 66 percent, and 67 percent of the reductions needed, respectively, from the 2012 base year to attain the NAAQS in 2022 (1-hour ozone NAAQS), 2023 (1997 ozone NAAQS) and 2031 (2008 ozone NAAQS). However, because already-adopted measures will not provide for attainment of the ozone NAAQS, the 2016 South Coast Ozone SIP includes District and CARB commitments to achieve additional emissions reductions. These commitments are discussed and evaluated in the paragraphs that follow.

i. District's Aggregate Emission Reduction Commitments

The District has primary responsibility in the South Coast for the regulation of stationary and certain types of area sources. The District has more limited authority with respect to mobile sources but is authorized to implement various programs, such as incentive programs, to reduce emissions from such sources as well. The District has made various commitments in previous plans as part of the attainment strategies to achieve the 1-hour ozone NAAQS and the 1997 ozone NAAQS.

Through adoption of the 2016 AQMP, the District is updating its previously-approved aggregate emissions reduction commitments made as part of the attainment demonstrations for the 1997 ozone NAAQS (by 2023) in the 2007 South Coast Ozone SIP and for the 1-hour ozone NAAQS (by 2022) in the 2012 AQMP; the District is also adopting aggregate emissions reduction commitments for the attainment demonstration for the 2008 ozone NAAQS. The District's commitments in the 2016 AQMP are similar in concept to those that were made in connection with the previously approved plans.

More specifically, through adoption of the 2016 AQMP, the District has committed to develop, adopt, submit, and implement the ozone measures listed in tables 4–2 (stationary source ozone measures) and 4–4 (mobile source ozone measures) in Chapter 4 of the 2016 AQMP to meet or exceed the emissions reduction commitments in tables 4–9 (1-hour ozone NAAQS), 4–10 (1997 ozone NAAQS) and 4–11 (2008 ozone NAAQS).[93]

In Table 2 below, we show the District's updated aggregate emissions reduction commitments from the 2016 AQMP with the corresponding commitments from the 2007 South Coast Ozone SIP and the 2012 AQMP. The District's commitments from the 2016 AQMP are, in concept, the same as the District's commitments that the EPA has approved as part of the attainment demonstrations in the 2007 South Coast Ozone SIP and the 2012 AQMP. In short, the District has committed to develop, adopt, submit and implement the specific measures listed in tables 4–2 and 4–4 of the 2016 AQMP on the adoption and implementation schedule set forth in those tables to meet or exceed the aggregate emissions reductions commitments. However, as with the earlier plans, the 2016 AQMP provides for a public process through which the District may substitute measures in tables 4–2 and 4–4 with other measures, provided that the overall equivalent emissions reductions by the adoption and implementation dates are maintained and that the applicable measure in table 4–2 or 4–4 is deemed by the District to be infeasible.[94]

TABLE 2—DISTRICT AGGREGATE EMISSION REDUCTION COMMITMENTS

[Summer planning inventory, tpd]

Plan	Year 2022		Year 2023		Year 2031	
	NO_X	VOC	NO_X	VOC	NO_X	VOC
2007 South Coast Ozone SIP[a]	--	--	9.2	19.3	--	--
2012 AQMP[b]	10.7	5.8	11.0	6.0	--	--
2016 AQMP[c]	20.6	6.1	23.0	6.4	31.0	9.6

[a] 2007 AQMP, Table 4–2A, as revised by Appendix F of the 2011 Progress Report—see 77 FR 12674, 12691 (March 1, 2012). Reductions are from the 2002 base year. The double-dash mark ("--") indicates that no commitment was made for a given year in a given plan.
[b] SCAQMD, Resolution 12–19 (December 7, 2012), 7–8; Table 4–11 of the 2012 AQMP; and 79 FR 29712, 29720 (May 23, 2014). Reductions are from the 2008 base year. The double-dash mark ("--") indicates that no commitment was made for a given year in a given plan.
[c] 2016 AQMP, tables 4–9, 4–10 and 4–11. Reductions are from the 2012 base year.

As noted above, the District expects to meet its emissions reduction commitments for NO_X and VOC by adopting new control measures and programs and strengthening existing control measures, as identified in tables 4–2 and 4–4 of the 2016 AQMP. These new or revised stationary control measures include stationary source regulatory measures, measures that recognize emissions reductions from energy and climate change-related programs, voluntary incentive measures, and other miscellaneous measures. In Table 3 below, we have combined the District's new stationary and mobile measures listed in tables 4–2 and 4–4 of the 2016 AQMP into a single table but only list those measures for which the District provides estimates of associated emissions reductions. The emissions reductions for individual measures shown in Table 3 are not intended to be enforceable but are estimates prepared by the District to show how the District expects at the present time to achieve the aggregate emissions reductions for 2022, 2023, and 2031. The enforceable components of the District's commitments are to effectuate the

[93] SCAQMD, Resolution 17–2 (March 3, 2017), 9.

[94] 2016 AQMP, pages 4–52—4–55.

measures to which it has committed on the schedule that it has adopted, and to achieve the aggregate emissions reductions by the given years.

TABLE 3—DISTRICT STATIONARY AND MOBILE SOURCE MEASURES

Number	Title	Adoption	Implementation period	NO_X emission reductions (tpd)			VOC emission reductions (tpd)		
				2022	2023	2031	2022	2023	2031
CMB–01	Transition to Zero and Near-Zero Emission Technologies for Stationary Sources.	2018	Ongoing	[a] 2.2	2.5	6.0	[a] 1.0	[c] 1.2	[c] 2.8
CMB–02	Emission Reductions from Replacement with Zero or Near-Zero NO_X Appliances in Commercial and Residential Applications.	2018	2020–2031	1.1	1.1	2.8			
CMB–03	Emission Reductions from Non-Refinery Flares.	2018	2020	1.4	1.4	1.5	0.4	[c] 0.4	[c] 0.4
CMB–04	Emission Reductions from Restaurant Burners and Residential Cooking.	2018	2022	0.8	0.8	1.6			
CMB–05	Further NO_X Reductions from RECLAIM Assessment.	2022	2025		0	[b] 5.0			
BCM–10	Emission Reductions from Greenwaste Composting.	2019	2020				1.5	1.5	1.8
FUG–01	Improved Leak Detection and Repair	2019	2022				2.0	2.0	2.0
CTS–01	Further Emission Reductions from Coatings, Solvents, Adhesives, and Sealants.	2017/2021	2020–2031				1.0	1.0	2.0
ECC–02	Co-Benefits from Existing Residential and Commercial Building Energy Efficiency Measures.	2018	Ongoing	[a] 0.3	0.3	1.1	[a] [c] 0.1	[c] 0.1	[c] 0.3
ECC–03	Additional Enhancements in Reducing Existing Residential Building Energy Use.	2018	Ongoing	[a] 1.0	1.2	2.1	[a] [c] 0.2	[c] 0.2	[c] 0.3
Stationary Sources Totals				6.7	7.3	20.1	6.1	6.4	9.6
MOB–10	Extension of the SOON [d] Provision for Construction/Industrial Equipment.	NA	Ongoing	1.9	1.9	1.9			
MOB–11	Extended Exchange Program	NA	Ongoing	[a] 2.5	2.9	1.0			
MOB–14	Emission Reductions from Incentive Programs.	NA	2016–2024	[a] 9.5	11	7.8			
Mobile Sources Totals				13.9	15.8	10.7			
Stationary and Mobile Sources Totals.				20.6	23.1	30.8	6.1	6.4	9.6

Notes:
[a] 86 percent of 2023 reductions planned for the control measures.
[b] 5 tpd reduction by 2025.
[c] Corresponding VOC reductions from other measures.
[d] Surplus Off-Road Opt-In for NO_X Program.
The sum of the emissions values may not equal the total shown due to rounding of the numbers.
Source: 2016 AQMP, tables 4–2, 4–4, 4–9, 4–10 and 4–11.

There are several ''Further Deployment of Cleaner Technologies'' measures (also referred to in today's action as ''new technology'' measures) in the 2016 State Strategy that identify the SCAQMD as an implementing agency, along with CARB and the EPA. CARB indicated that the implementation of the new technology measures is based on a combination of incentive funding, development of regulations, and quantification of emissions reduction benefits from operational efficiency actions and deployment of autonomous vehicles, connected vehicles, and intelligent transportation systems. The District has proposed numerous mobile source measures to further the implementation of CARB's new technology measures. These include proposals to continue several existing incentive programs (*e.g.*, the Carl Moyer Memorial Air Quality Standards Attainment Program, the Surplus Off-Road Opt-In for NO_X Program, and Proposition 1B—Goods Movement Emissions Reduction Program). In the 2016 AQMP, the District includes 15 mobile source measures to reduce VOC and NO_X emissions. With the exception of measures MOB–10, 11, and 14, the District has not yet quantified or assigned future reductions to their mobile source measures.[95] Other proposed District stationary and mobile sources measures [96] with future reductions not yet quantified include the following.

- Stationary source measures: ECC–01, Co-Benefit Emission Reductions from Greenhouse Gas (GHG) Programs, Policies, and Incentives; FLX–01, Improved Education and Public Outreach; FLX–02, Stationary Source VOC Incentives; MCS–01, Improved Breakdown Procedures and Process Re-Design; MCS–02, Application of All Feasible Measures; and ECC–04, Reduced Ozone Formation and Emission Reductions from Cool Roof Technology.
- Mobiles source measures: EGM–01, Emission Reductions from New Development and Redevelopment Projects; MOB–01, Emission Reductions at Commercial Marine Ports; MOB–02, Emission Reductions at Rail Yards and Intermodal Facilities; MOB–03, Emission Reductions at Warehouse

[95] 2016 AQMP, Table 4–4.

[96] All measures to be implemented by SCAQMD except: ECC–01 (various agencies); FLX–01 (SCAQMD and other parties); MOB–5, MOB–7, MOB–8, and MOB–9 (SCAQMD and CARB); MOB–6 (CARB, Bureau of Automotive Repair (BAR), SCAQMD), and MOB–12 (SoCal Regional Rail Authority).

Distribution Centers; MOB–04, Emission Reductions at Commercial Airports; MOB–05, Penetration of Partial Zero-Emission and Zero-Emission Vehicles; MOB–06, Accelerated Retirement of Older Light-Duty and Medium-Duty Vehicles; MOB–07, Accelerated Penetration of Partial Zero-Emission and Zero-Emission Light-Heavy- and Medium-Heavy-Duty Vehicles; MOB–08, Accelerated Retirement of Older On-Road Heavy-Duty Vehicles; MOB–09, On-Road Mobile Source Emission Reduction Credit Generation Program; MOB–12, Further Emission Reductions from Passenger Locomotives; and MOB–13, Off-Road Mobile Source Emission Reduction Credit Generation Program.

ii. CARB Aggregate Emissions Reduction Commitments

Source categories for which CARB has primary responsibility for reducing emissions in California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. CARB's 2016 State Strategy includes a comprehensive set of measures to achieve emissions reductions needed in the South Coast from mobile sources and consumer products. The measures in the 2016 State Strategy identify the regulatory and programmatic approaches necessary to deploy cleaner technologies and ensure sufficient penetration to meet the NAAQS deadlines. The measures in the 2016 State Strategy include technology-forcing engine standards, cleaner burning fuels, durability requirements and inspection programs to ensure clean in-use performance, sales requirements for advanced technologies, pilot programs to identify and advance new technologies, and incentive programs to accelerate technology deployment.

To be more specific, the 2016 State Strategy includes actions to increase the penetration of plug-in hybrid electric vehicles and zero-emission vehicles (ZEVs) in the light-duty vehicle sector. For heavy-duty vehicles, the 2016 State Strategy includes combustion engine technology that is effectively 90 percent cleaner than current standards. The 2016 State Strategy also includes targeted introduction of zero-emission technologies in heavy-duty applications that are suited to early adoption of ZEV technologies. The 2016 State Strategy includes a California action to establish new low-NO_X certification requirements, coupled with in-use performance requirements. The strategy also provides greater certification flexibility for advanced technologies. The measures could reduce emissions from today's heavy-duty trucks by up to 90 percent. Because trucks licensed outside of California account for a large portion of truck activity in California, the 2016 State Strategy calls for the EPA to develop a national low-NO_X engine standard and cites formal petitions for such rulemaking that have been submitted by several California air districts. In response to the petitions, on November 13, 2018, the EPA announced the Cleaner Trucks Initiative, a future rulemaking to update NO_X standards for highway heavy-duty trucks and engines.[97]

The 2016 State Strategy includes similar proposed actions for off-road sources, with a focus on deployment of ZEV technologies in smaller equipment types such as forklifts and airport ground support equipment. A low-emission diesel standard builds upon CARB's existing fuels framework by requiring that low-emission diesel fuels to be used to achieve greater criteria pollutant reductions. For sources that are primarily under federal jurisdiction, such as interstate trucks, locomotives, and ocean-going vessels, the 2016 State Strategy calls for EPA action to provide the needed emission reductions from these sources by setting more stringent engine standards. Lastly, the 2016 State Strategy contains a measure to address VOC emissions from consumer products, the largest source category of VOCs in California. Chapter 4 ("State SIP Measures") of the 2016 State Strategy provides a detailed description of the various measures included in the 2016 State Strategy, background and regulatory history for the measures, a description of the specific proposed actions to be taken and timing for those actions, an estimate of the related emissions reductions, and the specific SIP commitment by CARB with respect to each of the measures.

Through adoption of the 2016 State Strategy, CARB is updating its previously-approved aggregate emissions reduction commitments made as part of the attainment demonstration for the 1997 ozone NAAQS (by 2023) in the 2007 South Coast Ozone SIP, and CARB is adopting aggregate emissions reduction commitments for the attainment demonstration for the 2008 ozone NAAQS. CARB's commitments in the 2016 State Strategy are similar in concept to those that were made in connection with the previously approved plan.

More specifically, through adoption of the 2016 State Strategy, CARB has committed to bring to its Board for consideration the list of measures contained in Attachment A to CARB Resolution 17–7 according to the schedule set forth in Attachment A, and to achieve aggregate emissions reductions of 113 tpd of NO_X and 50 to 51 tpd of VOC by 2023, and 111 tpd of NO_X and 59 to 60 tpd of VOC by 2031 in the South Coast.[98]

In Table 4, below, we show CARB's updated aggregate emissions reduction commitments from the 2016 State Strategy with the corresponding commitments from the 2007 South Coast Ozone SIP for the 1997 ozone NAAQS and from the 2012 AQMP for the 1-hour ozone NAAQS. CARB's commitments from the 2016 State Strategy are, in concept, similar to CARB's commitments that the EPA has approved as part of the attainment demonstrations in the 2007 South Coast Ozone SIP and 2012 AQMP. As with the earlier plans, the 2016 State Strategy includes estimates of the emissions reductions from each of the individual new measures, but CARB's overall commitment is to achieve the total emission reductions necessary to attain the NAAQS.

TABLE 4—CARB AGGREGATE EMISSION REDUCTION COMMITMENTS

[Summer planning inventory, tpd]

Plan	Year 2022		Year 2023		Year 2031	
	NO_X	VOC	NO_X	VOC	NO_X	VOC
2007 South Coast Ozone SIP[a]:						
Defined Measures	--	--	141	54	--	--
New Technology Measures	--	--	241	40	--	--

[97] See *https://www.epa.gov/regulations-emissions-vehicles-and-engines/cleaner-truck-initiative.*

[98] CARB, Resolution 17–7 (March 23, 2017), 7.

TABLE 4—CARB AGGREGATE EMISSION REDUCTION COMMITMENTS—Continued

[Summer planning inventory, tpd]

Plan	Year 2022		Year 2023		Year 2031	
	NO_X	VOC	NO_X	VOC	NO_X	VOC
2012 AQMP [b]:						
Defined Measures	--	--	--	--	--	--
New Technology Measures	150	17	--	--	--	--
2016 South Coast Ozone SIP [c]:						
Defined and New Technology Measures	0	0	113	50–51	111	59–60

[a] 2009 State Strategy Update, 20; also see 76 FR 57872, 57882 (September 16, 2011). Reductions are from the 2002 base year. The double-dash mark ("--") indicates that no commitment was made for a given year in a given plan.
[b] 2012 AQMP, appendix VII, page VII–46; CARB Resolution 13–3 (January 25, 2013); and letter from Richard W. Cory, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region IX, dated May 2, 2014. Reductions are from the 2008 base year. The double-dash mark ("--") indicates that no commitment was made for a given year in a given plan.
[c] 2016 State Strategy, Table 4, and CARB Resolution 17–7 (March 23, 2017). Reductions are from the 2012 base year.

For previous South Coast ozone plans, CARB's aggregate emissions reduction commitments distinguished between those that were to be achieved through adoption and implementation of defined measures and those that were to be achieved through "new technology" measures. In this case, "new technology" measures refer to provisions in an ozone plan for an Extreme area that anticipate development of new control techniques or improvement of existing control technologies as provided for in CAA section 182(e)(5). For the 2016 South Coast Ozone SIP, CARB's aggregate emissions reduction commitments include both types of measures. However, CARB also identifies new technology measures for which it is requesting approval by the EPA under CAA section 182(e)(5). Table 5 below divides CARB's estimates of emissions reductions between new technology measures (*i.e.,* those identified for approval under CAA section 182(e)(5) by CARB) and the other measures (which we refer to as "defined measures.")

TABLE 5—ESTIMATES OF EMISSIONS REDUCTIONS FROM DEFINED AND NEW TECHNOLOGY MEASURES IN THE 2016 STATE STRATEGY

[Summer planning inventory, tpd, from 2012 base year emissions]

Year	VOC			NO_X		
	Defined measures	New technology measures	Total	Defined measures	New technology measures	Total
2023	9–10	41	50–51	5	108	113
2031	21–22	37	59–60	14	97	111

Sources: 2016 State Strategy, Table 4. Tonnage values for defined measures determined by subtracting all the new technology measures from the total emission reduction estimate. The sum of the emissions values may not equal the total shown due to rounding of the numbers.

Table 6 below lists CARB's defined measures and associated reductions from the 2016 State Strategy. As shown in Table 6, CARB estimates that the defined measures would reduce emissions of NO_X and VOC by 5 tpd and 9–10 tpd, respectively, by 2023 and by 14 tpd and 21–22 tpd, respectively, by 2031. Table 6 includes only those CARB defined measures for which CARB has developed emissions estimates.[99] We note that the emissions estimates shown in Table 6 are only estimates and are not binding on CARB under the terms of the commitments CARB has made for the South Coast as part of the 2016 State Strategy. Rather, CARB has committed to take certain regulatory and nonregulatory actions according to the schedule in the 2016 State Strategy and to achieve aggregate emissions reductions by 2023 and 2031. The reductions from any one measure in Table 6 could be more or less than the estimates shown.

TABLE 6—DEFINED MEASURES IN THE 2016 STATE STRATEGY

Measure	Adoption	Implementation		NO_X emission reductions (tpd)		VOC emission reductions (tpd)	
		Time frame	Agency	2023	2031	2023	2031
On-Road Light-Duty:							
Advanced Clean Cars 2	2020–2021	2026	CARB	-	0.6	-	0.4

[99] The defined measures in the 2016 State Strategy for which future reductions are not yet quantified include: Lower In-Use Emission Performance Assessment for on-road light-duty vehicles (CARB and the California Bureau of Automotive Repair); Medium and Heavy-Duty GHG Gas Phase 2 (CARB, EPA), Innovative Technology Certification Flexibility (CARB), and Zero-Emission Airport Shuttle Buses (CARB) for on-road heavy-duty vehicles; Incentivize Low Emission Efficient Ship Visits for ocean-going vessels (CARB); Zero-Emission Off-Road Emission Reduction Assessment (CARB), Zero-Emission Off-Road Worksite Emission Reduction Assessment (CARB), and Transport Refrigeration Units Used for Cold Storage for off-road equipment (CARB).

TABLE 6—DEFINED MEASURES IN THE 2016 STATE STRATEGY—Continued

Measure	Adoption	Implementation		NO_X emission reductions (tpd)		VOC emission reductions (tpd)	
		Time frame	Agency	2023	2031	2023	2031
On-Road Heavy-Duty:							
Lower In-Use Emission Performance Level	2017–2020	2018+	CARB	NYQ	NYQ	<0.1	<0.1
Low-NO_X Engine Standard—California Action	2019	2023	CARB	-	5	-	-
Innovative Clean Transit	2017	2018	CARB	<0.1	0.1	<0.1	<0.1
Last Mile Delivery	2018	2020	CARB	<0.1	0.4	<0.1	<0.1
Incentive Funding to Achieve Further Emission Reductions from On-Road Heavy Duty Vehicles [a].	ongoing	2016	CARB, SCAQMD.	3	3	0.4	0.4
Ocean-Going Vessels:							
At-Berth Regulation Amendments	2017–2018	2023	CARB	0.3	1	<0.1	<0.1
Off-Road Equipment:							
Zero-Emission Off-Road Forklift Regulation Phase 1	2020	2023	CARB	-	1	-	0.1
Zero-Emission Airport Ground Support Equipment	2018	2023	CARB	<0.1	<0.1	<0.1	<0.1
Small Off-Road Engines	2018–2020	2022	CARB	0.7	2	7	16
Low-Emission Diesel Requirement	by 2020	2023	CARB	0.3	1	NYQ	NYQ
Consumer Products:							
Consumer Products Program	2019–2021	2020 +	CARB	0	0	1–2	4–5
Total Emission Reductions	4	14	9–10	21–22			

Notes:
[a] On March 22, 2018, CARB adopted the "South Coast On-Road Heavy-Duty Vehicle Incentive Measure." On April 25, 2019, the EPA proposed to approve the measure as achieving 1 tpd of NO_X reductions in 2023. See 84 FR 17365.
NYQ means not yet quantified. A dash (-) refers to de minimis reductions.
The sum of the emissions values may not equal the total shown due to rounding of the numbers.
Source: 2016 State Strategy, Table 4; Attachment A to CARB Resolution 17–7 (March 23, 2017).

As noted above, the 2016 State Strategy identifies certain new technology measures for which CARB is requesting approval by the EPA under the provisions of section 182(e)(5) of the CAA. The 2016 AQMP does not rely on the new technology measures in the 2016 State Strategy to demonstrate RFP, but it does rely on them for attainment of the 1997 and 2008 ozone NAAQS in the South Coast by the applicable attainment dates.

Table 7 below lists CARB's new technology measures and associated reductions from the 2016 State Strategy. As shown in Table 7, CARB estimates that the new technology measures would reduce emissions of NO_X and VOC by 108 tpd and 41 tpd by 2023, and 97 tpd and 37 tpd by 2031, respectively. As noted above in connection with CARB's defined measures, the emissions estimates shown in Table 7 are only estimates and are not binding on CARB under the terms of the commitments CARB has made for the South Coast as part of the 2016 State Strategy. Rather, CARB has committed to take certain regulatory and nonregulatory actions according to the schedule in the 2016 State Strategy and to achieve aggregate emissions reductions by 2023 and 2031. CARB's aggregate emissions reduction commitments for years 2023 and 2031 do not distinguish between the defined measures and the new technology measures. The new technology measures in the 2016 State Strategy are accompanied by an enforceable commitment by CARB to develop, adopt and submit contingency measures by 2028 for the 2008 ozone NAAQS if the new technology measures do not achieve planned reductions, as required under CAA section 182(e)(5).[100] CARB's commitment to submit contingency measures for section 182(e)(5) purposes thus relates to attainment for the 2008 ozone NAAQS. With respect to attainment for the 1997 ozone NAAQS, CARB is relying on the previously-submitted and approved commitment to submit contingency measures for section 182(e)(5) purposes from the 2007 South Coast Ozone SIP.[101]

TABLE 7—NEW TECHNOLOGY MEASURES IN 2016 STATE STRATEGY [A]

Title	Adoption	Implementation		NO_X emission reductions (tpd)		VOC emission reductions (tpd)	
		Time frame	Agency	2023	2031	2023	2031
On-Road Light-Duty:							
Further Deployment of Cleaner Technologies [b].	ongoing	2016	CARB, SCAQMD, EPA	7	5	16	16
On-Road Heavy-Duty:							
Low-NO_X Engine Standard—Federal Action	2019	2024	EPA	-	7	-	-
Further Deployment of Cleaner Technologies	ongoing	2016	CARB, SCAQMD, EPA	34	11	4	1
Aircraft:							
Further Deployment of Cleaner Technologies	ongoing	2016	CARB, SCAQMD, EPA	9	13	NYQ	NYQ
Locomotives:							
More Stringent National Locomotive Emission Standards.	2017	2023	EPA	<0.1	2	<0.1	<0.1
Further Deployment of Cleaner Technologies	ongoing	2016	CARB, SCAQMD, EPA	7	3	0.3	0.3
Ocean-Going Vessels:							
Tier 4 Vessel Standards	2016–2018	2025	CARB, IMO	-	NYQ	-	NYQ

[100] CARB Resolution 17–8, 9.

[101] See 76 FR 57872, 57882 (September 16, 2011) referencing CARB Resolution 11–22, July 21, 2011), and in a letter dated November 18, 2011, from James N. Goldstene, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region IX.

TABLE 7—NEW TECHNOLOGY MEASURES IN 2016 STATE STRATEGY [A]—Continued

Title	Adoption	Implementation		NO_X emission reductions (tpd)		VOC emission reductions (tpd)	
		Time frame	Agency	2023	2031	2023	2031
Further Deployment of Cleaner Technologies	ongoing	2016	CARB, SCAQMD, EPA	30	38	NYQ	NYQ
Off-Road Equipment:							
Further Deployment of Cleaner Technologies	ongoing	2016	CARB, SCAQMD, EPA	21	18	21	20
Total Emission Reductions	-	-	-	108	97	41	37

Notes:
[a] CARB requested the EPA approve these measures under the provisions of section 182(e)(5) of the CAA.
[b] In today's action we also refer to these as new technology measures.
NYQ means not yet quantified. A dash (-) refers to de minimis reductions.
The sum of the emissions values may not equal the total shown due to rounding of the numbers.
Source: 2016 State Strategy, Table 4; Attachment A to CARB Resolution 17–7 (March 23, 2017).

In its 2016 State Strategy, CARB commits to achieving the aggregate emissions reductions needed in the South Coast for attaining the 1997 and 2008 ozone NAAQS from the defined and new technology measures. Even though the District does not have a new technology emissions reduction commitment in the 2016 AQMP, its numerous incentive programs in tables 4–2 and 4–4 of the 2016 AQMP will help advance new control technologies that will achieve long-term reductions and ultimately reduce CARB's remaining commitment for reductions in 2023 and 2031.

SCAQMD's Technology Advancement Office (TAO) is responsible for expediting the development, demonstration and commercialization of cleaner technologies and clean-burning fuels in the South Coast. TAO's mobile source projects have included development and demonstration of less-polluting automobiles, buses, trucks, construction equipment, boats, locomotives and other off-road vehicles involving advancements in engine design, improved batteries, fuel cells, and improved powertrains for electric vehicles. Other projects involve adapting or designing vehicles to run on clean fuels and developing the infrastructure needed to produce and deliver those fuels.[102] TAO's projects for stationary sources have included a wide array of low-NO_X combustion systems, low-VOC coatings and processes, and clean energy production systems including fuel cells, solar power, and other renewable energy systems.[103] The technical areas currently identified by TAO as the highest priority include fuel cells for transportation and power generation; diesel alternatives; electric and hybrid-electric technologies; off-road applications of alternative fuel technologies; VOC reduction technologies for stationary sources; and infrastructure development.[104]

In its 2016 State Strategy, CARB builds on and updates the new technology measures in prior state strategies (*e.g.,* the 2007 State Strategy as revised in 2009 and 2011). To implement the long-term strategy, CARB has committed to a process that will help ensure that the long-term measures are adopted and that reductions are achieved by the beginning of the last full ozone season before the attainment date. CARB is coordinating a government, private, and public effort to establish emission goals for critical mobile and stationary emission source categories. The effort includes periodic assessment of technology advancement opportunities and updates to its Board and the public regarding new emission control opportunities and progress in achieving the long-term measure reductions. CARB's commitment for implementing the long-term strategy also includes reporting back to its Board within one year of adoption of the 2016 State Strategy, and yearly thereafter.[105] This report will include:

1. The status of partnerships with the South Coast, San Joaquin Valley, the EPA, other government agencies, and the private sector to pursue research, demonstration, and pilot projects for further advancement of zero and near-zero emission technologies;

2. The status of the Financial Incentives Funding Action Plan, progress in identifying and implementing funding mechanisms, and status of State level incentive programs and allocation of funding to the South Coast and San Joaquin Valley regions;

3. The status of technology assessments, emerging technologies and emissions reduction opportunities. CARB staff will also report on implementation of actions identified by the SCAQMD and San Joaquin Valley Air Pollution Control District as well as actions contained in the California Sustainable Freight Action Plan, the 2030 Target Scoping Plan Update, SB 375, and other complementary efforts and the criteria pollutant benefits that result from these actions; and

4. Recommendations on the development of further regulatory measures and schedules for development for inclusion in the SIP.[106]

Approximately 70 percent of the reductions needed to meet the ozone standard in the South Coast in 2031 comes from existing or proposed regulatory actions. This includes ongoing implementation of the existing control program, combined with new regulatory measures identified in the 2016 State Strategy. The regulatory approach forms the core of the strategy. The remaining 30 percent of reductions is from additional efforts to enhance the deployment of cleaner technologies through new incentive or new regulatory actions. These actions will be implemented through the cleaner technologies measures for each mobile sector to provide further emissions reductions from the deployment of technologies necessary to meet the South Coast's Extreme ozone nonattainment area needs. The approaches contained in the cleaner technology measures include:

- Incentive programs to further accelerate technology penetration;
- Identification of additional regulatory approaches based on further technology assessments;
- Increased efficiency in moving people and freight;

[102] SCAQMD technology advancement web page at *http://yourstory.aqmd.gov/home/technology*, February 6, 2019.

[103] Id.

[104] Id.

[105] 2016 State Strategy, 46.

[106] *E.g.,* On March 22, 2018, CARB staff conducted a public meeting to brief the Board on substantial progress made in implementing various elements of the 2016 State Strategy and 2016 AQMP. The staff presentation can be viewed at *https://www.arb.ca.gov/board/books/2018/032218/18-2-5pres.pdf?utm_medium=email&utm_source=govdelivery.*

• Use of emerging transportation technologies, such as intelligent transportation systems and autonomous and connected vehicles; and

• Further federal actions, including support for demonstration programs, and supporting policies to achieve reductions from sources under federal and international regulatory authority.

The specific combination of approaches to achieve reductions under these cleaner technologies concepts will vary by source sector and the timing of needed reductions. Further details regarding the approach for each sector and identification of technologies are available in the measure descriptions in Chapter 4 ("State SIP Measures") of the 2016 State Strategy.

To achieve the emission reductions from the cleaner technology measures included in the 2016 State Strategy, the South Coast is also identifying mechanisms under its local authority to achieve emission reductions from mobile sources within the region. Given the need for emissions reductions, significant investments to support incentive programs will be critical to accelerate the penetration of the cleanest technologies in the South Coast. CARB staff has been working with SCAQMD and the EPA to identify funding strategies and ensure appropriate mechanisms are in place for an approvable SIP.

c. Attainment Demonstration

The 2016 AQMP includes a new attainment demonstration for the 2008 ozone NAAQS and updated attainment demonstrations for the 1-hour and 1997 ozone NAAQS. In December 2018, CARB submitted the 1-Hour Ozone Update, which revises the 1-hour ozone attainment demonstration in the 2016 AQMP. Each of the attainment demonstrations includes enforceable commitments for additional reductions necessary for attainment as discussed in the previous sections. To determine the additional NO_X reductions needed, the State and District evaluated scenarios for a controlled emissions level of NO_X necessary for attainment of the ozone standards. The "controlled emissions level" represents, based on modeling scenarios and implementation of adequate control measures, the remaining attainment year NO_X inventory consistent with the modeling used to demonstrate attainment. Table 8 below summarizes the controlled emissions level of NO_X selected by the District and CARB as necessary for attainment of the ozone standards.

TABLE 8—NO_X CONTROLLED EMISSIONS LEVEL FOR OZONE ATTAINMENT

Attainment year	2022	2023	2031
Standard	1-hour Ozone	1997 Ozone	2008 Ozone.
Controlled Emissions Level (tpd)	269	141	96.

i. Updated Attainment Demonstration for the 1-Hour Ozone NAAQS

The 2016 AQMP updates the EPA-approved 1-hour ozone attainment demonstration from the 2012 AQMP to reflect updated emissions inventories, photochemical models and modeling techniques. In December 2018, CARB submitted to the EPA the 1-Hour Ozone Update, which revises the 1-hour ozone attainment demonstration in the 2016 AQMP to account for updated emissions inventories that were not available at the time the 1-hour ozone attainment demonstration was completed for the 2016 AQMP.

Table 9 below summarizes the updated attainment demonstration for the 1-hour ozone NAAQS by listing the base year (2012) emissions level, the modeled attainment emissions level, and the reductions that the District has committed to achieve through adoption of the 2016 AQMP. The updated 1-hour ozone attainment demonstration does not rely on emissions reductions from the 2016 State Strategy. Also, unlike the approved 1-hour ozone attainment demonstration from the 2012 AQMP, the updated attainment demonstration does not rely on new technology measures.

As shown in Table 9, the majority of emission reductions needed for attaining the 1-hour ozone NAAQS by 2022 comes from baseline measures. These account for approximately 92 percent of the NO_X (233 tpd) and 95 percent of the VOC (113 tpd) reductions needed for attainment of the 1-hour ozone NAAQS. The baseline measures reflect CARB rules adopted by November 2015 and District rules adopted by December 2015.[107] Based on the modeling analysis in the 1-Hour Ozone Update, the District determined that additional reductions of 21 tpd of NO_X and 6 tpd of VOC would be sufficient for demonstrating attainment of the 1-hour ozone NAAQS by 2022. The 2016 South Coast Ozone SIP relies on the District's enforceable commitments to achieve aggregate emissions reductions through implementation of the measures described above in section III.D.2.b.i of this document to provide the reductions necessary to achieve the 1-hour ozone NAAQS by 2022.

TABLE 9—SUMMARY OF 1-HOUR OZONE NAAQS ATTAINMENT DEMONSTRATION

[Summer planning inventory, tpd]

	NO_X	VOC [a]
A. 2012 Base Year Emissions Level [b]	522.5	499.7
B. 2022 Attainment Year Baseline Emissions Level [c]	286.8	382.7
C. Set-Aside (Phase-Out of Toxics, General Conformity, SIP Reserve) [c]	3.1	4.5
D. 2022 Adjusted Baseline (*i.e.*, includes Set-Aside) (B + C)	289.9	387.2
E. 2022 Modeled Attainment Emissions Level [c]	269.3	381.2
F. Total Reductions Needed from 2012 Base Year Levels to Demonstrate Attainment (A – E)	253.2	118.5
G. Reductions from Baseline (*i.e.*, adopted) Measures, as adjusted to account for Set-Aside (A – D)	232.6	112.5
H. Reductions from District's Aggregate Emission Reduction Commitments from 2016 AQMP [d]	21.0	6.1
I. Reductions from CARB's Aggregate Emission Reduction Commitments from 2016 State Strategy—Defined Measures	0	0

[107] See the TSD for this proposed action for a list of District rules with post-2012 compliance dates affecting future baseline emissions projections. Also see 2016 AQMP, Appendix VI–C, Attachment VI–C–1 for a list of CARB rules adopted post-2012.

TABLE 9—SUMMARY OF 1-HOUR OZONE NAAQS ATTAINMENT DEMONSTRATION—Continued

[Summer planning inventory, tpd]

	NO_X	VOC [a]
J. Reductions from CARB's Aggregate Emission Reduction Commitments from 2016 State Strategy—New Technology Measures	0	0
K. Total Reductions from District and CARB Commitments in 2016 AQMP and 2016 State Strategy (H + I + J)	21.0	6.1
L. Total Reductions from Baseline Measures plus District and CARB Commitments in 2016 AQMP and 2016 State Strategy (G + K)	253.6	118.6
M. 2022 Emissions with Reductions from Control Strategy (A − L)	268.9	381.1
Attainment demonstrated?	Yes	

Notes and sources:
[a] While attainment of the 8-hour ozone NAAQS in the South Coast is dependent almost exclusively on NO_X reductions, both NO_X and VOC emissions reductions reduce 1-hour ozone levels.
[b] 2016 AQMP, Appendix III, Attachment B.
[c] 1-Hour Ozone Update, 7.
[d] 2016 AQMP, Table 4–9.

ii. Updated Attainment Demonstration for the 1997 Ozone NAAQS

In the 2016 AQMP and 2016 State Strategy, the District and State collectively update the attainment demonstration for the 1997 ozone NAAQS. The 2016 AQMP and 2016 State Strategy update the EPA-approved 1997 ozone NAAQS ozone attainment demonstration from the 2007 South Coast Ozone SIP to reflect updated emissions inventories, photochemical models and modeling techniques. Table 10 below summarizes the updated attainment demonstration for the 1997 ozone NAAQS by listing the base year (2012) emissions level, the modeled attainment emissions level, and the reductions that the District and CARB have committed to achieve through adoption of the 2016 AQMP and 2016 State Strategy.

As shown in Table 10, the majority of emission reductions needed for attaining the 1997 ozone NAAQS by 2023 comes from baseline measures. These account for approximately 66 percent of the NO_X (251 tpd) reductions needed for attainment of the 1997 ozone NAAQS. The 2016 South Coast Ozone SIP relies on the District's and CARB's enforceable commitments to achieve aggregate emission reductions through implementation of the measures described above in section III.D.2.b.i and III.D.2.b.ii of this document to provide the reductions (beyond those from baseline measures) that are necessary to achieve the 1997 ozone NAAQS by 2023.

TABLE 10—SUMMARY OF 1997 OZONE NAAQS ATTAINMENT DEMONSTRATION

[Summer planning inventory, tpd]

	NO_X [a]
A. 2012 Base Year Emissions Level [b]	522
B. 2023 Attainment Year Baseline Emissions Level [b]	269
C. Set-Aside (Phase-Out of Toxics, General Conformity, SIP Reserve) [c]	3
D. 2023 Adjusted Baseline (*i.e.*, includes Set-Aside) (B + C)	272
E. 2023 Modeled Attainment Emissions Level [d]	141
F. Total Reductions Needed from 2012 Base Year Levels to Demonstrate Attainment (A − E)	381
G. Reductions from Baseline (*i.e.*, adopted) Measures, as adjusted to account for Set-Aside (A − D)	250
H. Reductions from District's Aggregate Emission Reduction Commitments from 2016 AQMP [e]	23
I. Reductions from CARB's Aggregate Emission Reduction Commitments from 2016 State Strategy—Defined Measures [f]	5
J. Reductions from CARB's Aggregate Emission Reduction Commitments from 2016 State Strategy—New Technology Measures [f]	108
K. Total Reductions from District and CARB Commitments in 2016 AQMP and 2016 State Strategy (H + I + J)	136
L. Total Reductions from Baseline Measures plus District and CARB Commitments in 2016 AQMP and 2016 State Strategy (G + K)	386
M. 2023 Emissions with Reductions from Control Strategy (A − L)	136
Attainment demonstrated?	Yes

Notes and sources:
[a] VOC emissions are not included in this table because attainment of the 8-hour ozone NAAQS in the South Coast is dependent almost exclusively on NO_X reductions.
[b] 2016 AQMP, Appendix III, Attachment B; Year 2023 baseline estimates for aircraft, oceangoing vessels, and commercial harbor craft have been updated based on information contained in the 2018 SIP Update, page A–35.
[c] 2016 AQMP, Appendix III, pages II–2–90 through III–2–92.
[d] 2016 AQMP, Appendix V, page V–4–2.
[e] 2016 AQMP, Table 4–10.
[f] 2016 State Strategy, Table 4; CARB's aggregate emission reduction commitment is for 113 tpd of NO_X reductions by 2023; for analytical purposes only, we have distinguished the estimated emissions reductions for defined measures from those for new technology measures.

iii. Attainment Demonstration for the 2008 Ozone NAAQS

In the 2016 AQMP and 2016 State Strategy, the District and State collectively demonstrate attainment of the 2008 ozone NAAQS. Table 11 below summarizes the attainment demonstration for the 2008 ozone NAAQS by listing the base year (2012) emissions level, the modeled attainment emissions level, and the reductions that the District and CARB have committed

to achieve through adoption of the 2016 AQMP and 2016 State Strategy.

As shown in Table 11, the majority of emission reductions needed for attaining the 2008 ozone NAAQS by 2031 comes from baseline measures. These account for approximately 66 percent of the NO_X (283 tpd) reductions needed for attainment of the 2008 ozone NAAQS. The 2016 South Coast Ozone SIP relies on the District's and CARB's enforceable commitments to achieve aggregate emission reductions through implementation of the measures described above in section III.D.2.b.i and III.D.2.b.ii of this document to provide the reductions (beyond those from baseline measures) that are necessary to achieve the 2008 ozone NAAQS by 2031.

TABLE 11—SUMMARY OF 2008 OZONE NAAQS ATTAINMENT DEMONSTRATION

[Summer planning inventory, tpd]

	NO_X [a]
A. 2012 Base Year Emissions Level [b]	522
B. 2031 Attainment Year Baseline Emissions Level [b]	238
C. Set-Aside (Phase-Out of Toxics, General Conformity, SIP Reserve) [c]	1
D. 2031 Adjusted Baseline (*i.e.*, includes Set-Aside) (B + C)	239
E. 2031 Modeled Attainment Emissions Level [d]	96
F. Total Reductions Needed from 2012 Base Year Levels to Demonstrate Attainment (A – E)	426
G. Reductions from Baseline (*i.e.*, adopted) Measures, as adjusted to account for Set-Aside (A – D)	283
H. Reductions from District's Aggregate Emission Reduction Commitments from 2016 AQMP [e]	31
I. Reductions from CARB's Aggregate Emission Reduction Commitments from 2016 State Strategy—Defined Measures [f]	14
J. Reductions from CARB's Aggregate Emission Reduction Commitments from 2016 State Strategy—New Technology Measures [f]	97
K. Total Reductions from District and CARB Commitments in 2016 AQMP and 2016 State Strategy (H + I + J)	142
L. Total Reductions from Baseline Measures plus District and CARB Commitments in 2016 AQMP and 2016 State Strategy (G + K)	425
M. 2031 Emissions with Reductions from Control Strategy (A – L)	97
Attainment demonstrated?	Yes

Notes and sources:

[a] VOC emissions are not included in this table because attainment of the 8-hour ozone NAAQS in the South Coast is dependent almost exclusively on NO_X reductions.

[b] 2016 AQMP, Appendix III, Attachment B; Year 2031 baseline estimates for aircraft, oceangoing vessels, and commercial harbor craft have been updated based on information contained in the 2018 SIP Update, page A–35.

[c] 2016 AQMP, Appendix III, pages II–2–90 through III–2–92.

[d] 2016 AQMP, Appendix V, page V–4–2.

[e] 2016 AQMP, Table 4–11.

[f] 2016 State Strategy, Table 4; CARB's aggregate emission reduction commitment is for 111 tpd of NO_X reductions by 2031; for analytical purposes only, we have distinguished the estimated emissions reductions for defined measures from those for new technology measures.

3. The EPA's Review of the State's Submission

a. Photochemical Modeling

To approve a SIP's attainment demonstration, the EPA must make several findings. First, we must find that the demonstration's technical bases, including the emissions inventories and air quality modeling, are adequate. As discussed above in section III.A of this action, we are proposing to approve the base year emissions inventory and to find that the future year emissions projections in the 2016 AQMP reflect appropriate calculation methods and that the latest planning assumptions are properly supported by SIP-approved stationary and mobile source measures.

With respect to the photochemical modeling in the 2016 AQMP and 1-Hour Ozone Update, based on our review of appendix V of the 2016 AQMP and the 1-Hour Ozone Update, the EPA finds that the modeling is adequate for purposes of supporting the attainment demonstration.[108] First, we note the extensive discussion of modeling procedures, tests, and performance analyses called for in the Modeling Protocol (*i.e.*, chapter 2 of Appendix V of the 2016 AQMP) and the good model performance. Second, we find the WRF meteorological model results and performance statistics including hourly time series graphs of wind speed, direction, and temperature for the South Coast, to be satisfactory and consistent with our Modeling Guidance.[109] Performance was evaluated for each month in each zone for the entire year of 2012.[110] Diurnal variation of temperature, humidity and surface wind are well represented by WRF. Geographically, winds are predicted most accurately at the inland urban receptor sites. Accurate wind predictions in this region of elevated ozone concentrations is one of the most critical factors to simulate chemical transport. Overall, the daily WRF simulation for 2012 provided representative meteorological fields that characterized the observed conditions well.

The model performance statistics for ozone are described in chapters 5 and 8 of Appendix V and are based on the statistical evaluation recommended in the Modeling Guidance. Model performance was provided for 8-hour and 1-hour daily maximum ozone for each of the South Coast sub-regions.[111] The model performance varied by zone, with over-prediction in the "Coastal zone" and under-prediction in the "San Fernando," and "Foothills" zones. The model ozone predictions in the "Urban Receptor" zone, where the design site station is located, agree reasonably well with the measurements.[112] The 2016

[108] The EPA's review of the modeling and attainment demonstration is discussed in greater detail in section V. Modeling and Attainment Demonstration of the TSD.

[109] Modeling Guidance, 30.

[110] Temperature, water vapor mixing ratio, and wind speed were evaluated in terms of normalized gross bias and normalized gross error.

[111] These zones are represented by the following ozone monitoring sites: "Coastal"(Costa Mesa, LAX, Long Beach, Mission Viejo, West Los Angeles); "Urban Source"(Anaheim, Central Los Angeles, Compton, La Habra, Pico Rivera, Pomona) "San Fernando"(Reseda, Santa Clarita, Burbank); "Foothills"(Azusa, Glendora, Pasadena); and "Urban Receptor"(Crestline, Fontana, Lake Elsinore, Mira Loma, Redlands, Rubidoux, San Bernardino, Upland).

[112] Table V–5–7; 2012 Base Year 8-Hour Average Ozone Performance for Days When Regional 8-Hour Maximum ≥ 60 parts per billion in the "Urban

Continued

AQMP also presents ozone frequency distributions, scatter plots, and plots of bias against concentration. The scatter and density scatter plots show low bias at high concentrations, and higher bias at low concentrations. The modeling guidance requires the use of only the top 10 days in the RRF calculation, indicating that the modeling capability to predict high concentrations is more important than the prediction of low concentrations. The supplemental hourly time series show generally good performance, though many individual daily ozone peaks are underpredicted. Note that, because only relative changes are used from the modeling, the underprediction of absolute ozone concentrations does not mean that future concentrations will be underestimated. The 2016 AQMP's unmonitored area analysis showed concentrations below 1997 and 2008 ozone NAAQS for all locations.[113] This analysis adds assurance to the attainment demonstrations that all locations in the South Coast will attain the 1997 ozone NAAQS by 2023 and the 2008 ozone NAAQS by 2031. In addition, the weight of evidence analyses presented in the 2016 AQMP and 1-Hour Update provide additional information with respect to the sensitivity to emission changes and improve the understanding of the model performance. We are proposing to find the air quality modeling adequate to support the updated attainment demonstrations for the 1-hour ozone and 1997 ozone NAAQS and the attainment demonstration for the 2008 ozone NAAQS, based on reasonable meteorological and ozone modeling performance, supported by the unmonitored area and weight of evidence analyses.

b. Control Strategy for Attainment

Second, we must find that the emissions reductions that are relied on for attainment are creditable and are sufficient to provide for attainment. As shown in tables 9, 10, and 11 above, the 2016 South Coast Ozone SIP relies on adopted measures to achieve a significant portion of the emissions reductions needed to attain the 1-hour ozone NAAQS by 2022, the 1997 ozone NAAQS by 2023, and the 2008 ozone NAAQS by 2031. The balance of the reductions needed for attainment is in the form of enforceable commitments to take certain specific regulatory and nonregulatory actions within prescribed periods and to achieve aggregate tonnage reductions of VOC or NO_X by specific years in the South Coast. The enforceable commitments made by the District and CARB through adoption of the 2016 AQMP and 2016 State Strategy are similar to the enforceable commitments that the EPA has approved as part of attainment demonstrations in previous California air quality plans and that have withstood legal challenge.[114]

As noted in the preceding paragraph the EPA has previously accepted enforceable commitments in lieu of adopted control measures in attainment demonstrations when the circumstances warrant them and when the commitments meet specific criteria. We believe that, with respect to all three ozone NAAQS, circumstances warrant the consideration of enforceable commitments as part of the attainment demonstrations for the South Coast. First, as shown in tables 9, 10 and 11 above, a substantial portion of the emission reductions needed to demonstrate attainment in the South Coast come from measures adopted prior to adoption and submittal of the 2016 AQMP and 2016 State Strategy. As a result of these State and District efforts, most emissions sources in the South Coast are currently subject to stringent emission limitations and other requirements, leaving few opportunities to further reduce emissions. In the 2016 AQMP and 2016 State Strategy, the District and CARB identified potential control measures that could provide many of the additional emissions reductions needed for attainment. These are described above in sections III.D.2.b.i and III.D.2.b.ii of this action. However, the timeline needed to develop, adopt, and implement these measures went beyond the required submittal date for the attainment demonstration for the South Coast for the 2008 ozone NAAQS. These circumstances warrant the District's and CARB's reliance on enforceable commitments as part of the attainment demonstrations for the 1-hour, 1997, and 2008 ozone NAAQS.

Given the State's demonstrated need for reliance on enforceable commitments, we now consider the three factors the EPA uses to determine whether the use of enforceable commitments in lieu of adopted measures to meet CAA planning requirements is approvable: (a) Does the commitment address a limited portion of the statutorily-required program; (b) is the state capable of fulfilling its commitment; and (c) is the commitment for a reasonable and appropriate period of time.

i. Commitments are a Limited Portion of Required Reductions

For the first factor, we look to see if the commitment addresses a limited portion of a statutory requirement and review the amount of emissions reductions needed to demonstrate attainment in a nonattainment area. For this calculation, reductions assigned to the new technologies provision (*i.e.*, CAA section 182(e)(5) new technology measures) are not counted as commitments.[115]

Tables 9, 10, and 11 above show emission reductions needed to demonstrate attainment of the 1-hour, 1997, and 2008 8-hour NAAQS in the South Coast and the aggregate emissions reductions commitments by the District and CARB. Based on these values, we have calculated the percent of required reductions that would come from enforceable commitments by the District and CARB (other than new technology measures). See Table 12 below.

Receptor" region. Appendix V of the 2016 AQMP, page V–5–13.

[113] Appendix V of the 2016 AQMP, Unmonitored Area Analysis, V–5–28 to V–5–35. Spatial projections of the 8-hour and 1-hour design values were also provided. See Appendix V of the 2016 AQMP, Spatial Projections of 8-Hour Ozone Design Values, pages V–5–25 to V–5–28, and 1-Hour Ozone Update, Spatial Projections of 1-Hour Ozone Design Values, p. 10–11.

[114] See *Committee for a Better Arvin* v. *EPA*, 786 F.3d 1169 (9th Cir. 2015) (approval of state commitments to propose and adopt emissions control measures and to achieve aggregate emissions reductions for San Joaquin Valley ozone and particulate matter plans upheld); *Physicians for Social Responsibility—Los Angeles* v. *EPA*, 9th Cir., memorandum opinion issued July 25, 2016 (approval of air district commitments to propose and adopt measures and to achieve aggregate emissions reductions for South Coast 1-hour ozone plan upheld).

[115] CAA section 182(e)(5) specifically allows EPA to approve an attainment demonstration that relies on reductions from new technologies. This provision is separate from the requirement in CAA section 172(c)(6) for enforceable emissions limitations under which enforceable commitments are considered. As a result, reductions attributed in the attainment demonstration to new technologies are not considered part of the State's enforceable commitments for purposes of determining the percentage of reductions needed for attainment that remain as commitments.

TABLE 12—ENFORCEABLE AGGREGATE COMMITMENTS AS A PERCENTAGE OF REQUIRED REDUCTIONS [a]

Attainment year	2022		2023	2031
	NO_X	VOC	NO_X	NO_X
Tons per day	21	6	28	45
Percentage of Required Reductions [b]	8%	5%	7%	11%

Notes and sources:
[a] CAA section 182(e)(5) reductions are not included below.
[b] The percentage of required emissions from enforceable commitments is calculated by dividing the sum of Rows H and I in tables 9, 10, and 11 above by Row F.

As shown in Table 12, when compared to the total reductions needed to demonstrate attainment (not including the CAA section 182(e)(5) reductions in the attainment demonstration), the remaining portion of the enforceable commitments represents a small fraction of the reductions needed. Historically, the EPA has approved SIPs with enforceable commitments in the range of approximately 10 percent of the total needed reductions for attainment.[116] Thus, we find that the District's and CARB commitments in the 2016 AQMP and 2016 State Strategy for the South Coast address a limited proportion of the required emission reductions.

ii. The State Is Capable of Fulfilling its Commitment

For the second factor, we consider whether the District and CARB are capable of fulfilling their commitments. CARB adopted and submitted the 2016 State Strategy to achieve the reductions necessary from mobile sources, fuels, and consumer products to meet ozone and $PM_{2.5}$ NAAQS over the next 15 years. The 2016 State Strategy builds on the 2007 State Strategy and its revisions. The 2016 State Strategy shows that CARB has made significant progress in fulfilling its enforceable commitments from the 2007 South Coast Ozone SIP. The District has also made significant progress in meeting its enforceable commitments in its prior AQMPs.

The District and CARB also have a history of funding incentive grant programs to reduce emissions from the on- and off-road engine fleets. CARB has also continued to work with the District on defining funding needs and mechanisms for implementing the 2016 State Strategy. Working with CARB, the District has estimated that sustained funding levels of approximately $1 billion per year through 2031 will be needed to support the necessary scale of technology transformation. The District developed a Draft Financial Incentives Funding Action Plan ("Funding Action Plan")[117] that describes existing sources of funding, new funding opportunities, activities that will be undertaken to pursue each potential funding mechanism, as well as a schedule and reporting process. As part of this effort, the District has identified a broad spectrum of potential funding mechanisms that could meet the region's funding needs. The District established a stakeholder-based 2016 AQMP Funding Working Group that began meeting in August 2017 to help further develop and implement the Funding Action Plan. CARB will continue to collaborate with the District on the Funding Action Plan, as well as play a key role in implementing state-level efforts that are facilitating the transition to cleaner technologies, such as the California Sustainable Freight Action Plan, the ZEV Action Plan, and the Transformative Climate Communities program.

Given CARB's and the District's efforts to date to reduce emissions, we believe that the State and District are capable of meeting their enforceable commitments to adopt measures that will reduce emissions to the levels needed to attain the 1-hour, 1997, and 2008 ozone NAAQS in the South Coast by the 2022, 2023, and 2031 attainment years, respectively.

iii. The Commitment Is for a Reasonable and Appropriate Timeframe

For the third and last factor, we consider whether the commitment is for a reasonable and appropriate period of time. To meet the commitments to adopt measures to reduce emissions to the levels needed to attain the 1-hour, 1997, and 2008 ozone NAAQS in the South Coast, the 2016 AQMP and 2016 State Strategy includes ambitious rule development, adoption, and implementation schedules. The District and CARB have committed to take the necessary actions and to achieve the remaining reductions by 2022, 2023, and 2031. We believe that this period is appropriate given the technological and economic challenges associated with the control measures that will be needed to achieve these reductions and given the procedures under state law for development and adoption of these measures. In addition, these reductions are not needed to meet RFP targets for the 2008 ozone NAAQS, and the adoption and submission timeframe ensures adequate time for implementation by the beginning of the last full ozone season applicable to each of the three ozone standards addressed in the 2016 South Coast Ozone SIP. Thus, the commitments are for a reasonable and appropriate period of time.

iv. CAA Section 182(e)(5) New Technology Provisions

For ozone nonattainment areas classified as Extreme, the CAA recognizes that an attainment demonstration may need to rely to a certain extent on new or evolving technologies, given the long time period between developing the initial plan and attaining the standard, and the degree of emissions reductions needed to attain. To address these needs, CAA section 182(e)(5) authorizes the EPA to approve provisions in an Extreme area plan which "anticipate development of new control techniques or improvement of existing control technologies," and to approve an attainment demonstration based on such provisions, if the state demonstrates that: (1) Such provisions are not necessary to achieve the incremental emission reductions required during the first 10 years after November 15, 1990; and (2) the state has submitted enforceable commitments to develop and adopt contingency measures to be implemented if the anticipated technologies do not achieve the planned reductions. The state must submit these contingency measures to the EPA no later than 3 years before

[116] See our approval of the following plans: San Joaquin Valley (SJV) PM_{10} Plan at 69 FR 30005 (May 26, 2004); SJV 1-hour ozone plan at 75 FR 10420 (March 8, 2010); Houston-Galveston 1-hour ozone plan at 66 FR 57160 (November 14, 2001); South Coast 1997 8-hour ozone plan at 77 FR 12674 (March 1, 2012); and South Coast 1-hour ozone plan at 79 FR 52526 (September 3, 2014).

[117] See *http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft financialincentivefunddec2016.pdf.*

proposed implementation of these long-term measures, and the contingency measures must be "adequate to produce emissions reductions sufficient, in conjunction with other approved plan provisions, to achieve the periodic emissions reductions required by [CAA sections 182(b)(1) or (c)(2)] and attainment by the applicable dates." [118]

The General Preamble further provides that the new technology measures contemplated by section 182(e)(5) may include those that anticipate future technological developments as well as those that require complex analyses, decision making, and coordination among a number of government agencies.[119] An attainment demonstration that relies on long-term new technology measures under section 182(e)(5) must identify any such measures and contain a schedule outlining the steps leading to final development and adoption of the measures.[120]

CARB and the SCAQMD have demonstrated a clear need for emissions reductions from new and improved control technologies to reduce air pollution in the South Coast. The adopted control measures and enforceable commitments, discussed above, provide the majority, but not all, of the balance of the emissions reductions needed to attain the 1997 and 2008 ozone NAAQS by 2023, and 2031, respectively. (The updated attainment demonstration in the 2016 South Coast Ozone SIP for the 1-hour ozone NAAQS does not rely on CAA section 182(e)(5) new technology provisions.)

Through adoption of the 2016 State Strategy, CARB is updating its previously-approved commitments from the 2007 South Coast Ozone SIP to achieve aggregate emissions reductions from defined and new technology measures for the 1997 ozone NAAQS. More specifically, CARB is replacing its commitments to achieve 141 tpd of NO_X reductions and 54 tpd of VOC reductions from defined measures and to achieve 241 tpd of NO_X reductions and 40 tpd of VOC reductions from new technology measures by 2023 with a combined (*i.e.,* defined and new technology measures together in a single commitment) commitment to achieve 113 tpd of NO_X reductions and 50–51 tpd of VOC reductions by 2023.

We find that CARB's updated commitment [121] for the 1997 ozone NAAQS in the 2016 State Strategy satisfies the criteria in CAA section 182(e)(5) for the following reasons: (1) The 2016 South Coast Ozone SIP does not rely on the new technology measure reductions until the attainment year (2023); (2) it does not rely on new technology measure reductions to achieve RFP milestones for the first 10 years after designation (for the 1997 ozone NAAQS); and (3) the previously-approved commitment by CARB to submit contingency measures by 2020 (as necessary to cover any shortfall from new technology measures) remains in effect. Moreover, we find that the 2016 State Strategy adequately describes the new technology measures by, among other things, identifying a schedule outlining the specific actions to be taken to develop and adopt the measures and achieve the related reductions.

With respect to attainment of the 2008 ozone NAAQS for the South Coast, through adoption of the 2016 State Strategy, CARB commits to achieve aggregate emissions reductions from a combination of defined and new technology measures of 111 tpd of NO_X and 59–60 tpd of VOC by 2031. As described above with respect to CARB's updated commitment for the 1997 ozone NAAQS, we recognize that the 2016 State Strategy does not rely on the new technology measure reductions until the attainment year (2031) and thus, does not rely on them to achieve RFP milestones for the first 10 years after designation (for the 2008 ozone NAAQS). Also, we find that CARB's description of the new technology measures in the 2016 State Strategy to be adequate. For the 2008 ozone NAAQS, CARB has submitted a new commitment to develop, adopt and submit contingency measures by 2028 if new technology measures do not achieve planned reductions.[122] We find that CARB's new commitment complies with the criterion in CAA section 182(e)(5) that requires submittal of such contingency measures no later than 3 years prior to implementation of the new technology measures.

v. Proposed Action on Measures in the Attainment Strategy

As discussed above, we believe that circumstances here warrant the consideration of enforceable commitments, and that the three criteria are met: (1) The commitments constitute a limited portion of the required emissions reductions; (2) both CARB and the District are capable of meeting their commitments; and (3) the commitments are for an appropriate timeframe. Based on these evaluations, we are proposing to approve the enforceable commitments as part of the attainment demonstration.

More specifically, we propose to approve the SCAQMD's updated commitments for the 1-hour and 1997 ozone NAAQS and new commitment for the 2008 ozone NAAQS: (1) To develop, adopt, submit, and implement the ozone measures in tables 4–2 and 4–4 of Chapter 4 in the 2016 AQMP (main document); and (2) to meet or exceed the aggregate emissions reduction commitments identified in tables 4–9 through 4–11 of the 2016 AQMP (main document); and (3) to substitute any other measures as necessary to make up any emissions reduction shortfall following the procedures set forth for such substitution in Chapter 4 (pages 4–54 and 4–55) of the 2016 AQMP.

We also propose to approve CARB's updated commitment for the 1997 ozone NAAQS and new commitment for the 2008 ozone NAAQS: (1) To bring to its Board for consideration the list of proposed SIP measures outlined in Chapter 4 of the 2016 State Strategy and included in Attachment A ("Proposed New SIP Measures and Schedule") of CARB Board Resolution 17–7 according to the schedule set forth therein; and (2) to achieve the aggregate emission reductions from defined and new technology measures for the South Coast outlined in the 2016 State Strategy of 113 tpd of NO_X and 50–51 tpd of VOC by 2023 and 111 tpd of NO_X and 59–60 tpd of VOC by 2031. In connection with the new technology measures, we propose to find that the 2016 South Coast Ozone SIP meets the criteria for reliance on new technology measures in CAA section 182(e)(5) for the 1997 and 2008 ozone NAAQS. Our proposed finding in this regard is based on the proposed approval herein of CARB's commitment in Resolution 17–8 (March 23, 2017) to develop, adopt, and submit contingency measures by 2028 (for the purposes of attaining the 2008 ozone NAAQS in the South Coast) if new technology measures do not achieve planned reductions. (As noted previously, CARB has already submitted as part of the 2007 South Coast Ozone SIP, and the EPA has approved, a commitment to submit such measures by 2020 for the purposes of attaining the 1997 ozone NAAQS in the South Coast if new technology measures do not achieve planned reductions.)

[118] Id.

[119] General Preamble, 13524.

[120] Id.

[121] We approved CARB's commitment for contingency measures to cover any new technology measures shortfall as part of our approval of the 2007 South Coast Ozone SIP. 77 FR 12674, at 12695 (March 1, 2012) (approval of section 182(e)(5) contingency measure commitment in CARB Resolution 11–22 (July 21, 2011).

[122] CARB Resolution 17–8, 9 (March 23, 2017) (CARB resolution adopting the 2016 AQMP as a revision to the California SIP).

c. Attainment Demonstration

Based on our proposed determinations that the photochemical modeling and control strategy are acceptable, and our proposed approval of the aggregate emissions reduction commitments by the District and CARB, including the commitment by CARB to submit contingency measures to cover the reductions from new technology measures if needed, we propose to approve the updated attainment demonstrations for the 1-hour ozone NAAQS and the 1997 ozone NAAQS, and the attainment demonstration for the 2008 ozone NAAQS in the 2016 South Coast Ozone SIP as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108.[123]

E. Rate of Progress Plan and Reasonable Further Progress Demonstration

1. Statutory and Regulatory Requirements

Requirements for RFP for ozone nonattainment areas are specified in CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B). Under CAA section 171(1), RFP is defined as meaning such annual incremental reductions in emissions of the relevant air pollutant as are required under part D ("Plan Requirements for Nonattainment Areas") or may reasonably be required by the EPA for the purpose of ensuring attainment of the applicable NAAQS by the applicable date. CAA section 182(b)(1) specifically requires that ozone nonattainment areas that are classified as Moderate or above demonstrate a 15 percent reduction in VOC between the years of 1990 and 1996. The EPA has typically referred to section 182(b)(1) as the Rate of Progress (ROP) requirement. For ozone nonattainment areas classified as Serious or higher, section 182(c)(2)(B) requires reductions averaged over each consecutive 3-year period, beginning 6 years after the baseline year until the attainment date, of at least 3 percent of baseline emissions per year. The provisions in CAA section 182(c)(2)(B)(ii) allow an amount less than 3 percent of such baseline emissions each year if the state demonstrates to the EPA that the plan includes all measures that can feasibly be implemented in the area in light of technological achievability.

In the 2008 Ozone SRR, the EPA provides that areas classified Moderate or higher will have met the ROP requirements of CAA section 182(b)(1) if the area has a fully approved 15 percent ROP plan for the 1-hour or 1997 8-hour ozone standards, provided the boundaries of the ozone nonattainment areas are the same.[124] For such areas, the EPA interprets the RFP requirements of CAA section 172(c)(2) to require areas classified as Moderate to provide a 15 percent emission reduction of ozone precursors within 6 years of the baseline year. Areas classified as Serious or higher must meet the RFP requirements of CAA section 182(c)(2)(B) by providing an 18 percent reduction of ozone precursors in the first 6-year period, and an average ozone precursor emission reduction of 3 percent per year for all remaining 3-year periods thereafter.[125] To meet CAA sections 172(c)(2) and 182(c)(2)(B) RFP requirements, the state may substitute NO_X emissions reductions for VOC reductions.[126]

Except as specifically provided in CAA section 182(b)(1)(C), emissions reductions from all SIP-approved, federally promulgated, or otherwise SIP-creditable measures that occur after the baseline year are creditable for purposes of demonstrating that the RFP targets are met. Because the EPA has determined that the passage of time has caused the effect of certain exclusions to be de minimis, the RFP demonstration is no longer required to calculate and specifically exclude reductions from measures related to motor vehicle exhaust or evaporative emissions promulgated by January 1, 1990; regulations concerning Reid vapor pressure promulgated by November 15, 1990; measures to correct previous RACT requirements; and, measures required to correct previous inspection and maintenance (I/M) programs.[127]

The 2008 Ozone SRR requires the RFP baseline year to be the most recent calendar year for which a complete triennial inventory was required to be submitted to the EPA. For the purposes of developing RFP demonstrations for the 2008 ozone NAAQS, the applicable triennial inventory year is 2011. As discussed previously, the 2008 Ozone SRR provided states with the opportunity to use an alternative baseline year for RFP,[128] but that provision of the 2008 Ozone SRR was vacated by the D.C. Circuit in the *South Coast II* decision.

2. Summary of the State's Submission

In response to the *South Coast II* decision, CARB developed the 2018 SIP Update, which replaces the RFP portion of the 2016 AQMP and includes updated emissions estimates for the RFP baseline year, subsequent milestone years, and the attainment year, and an updated RFP demonstration relying on a 2011 RFP baseline year.[129] To develop the 2011 RFP baseline inventory, CARB relied on actual emissions reported from industrial point sources for year 2011 and backcast emissions from smaller stationary sources and area sources from 2012 to 2011 using the same growth and control factors as was used for the 2016 AQMP. To develop the emissions inventories for the RFP milestone years (*i.e.*, 2017, 2020, 2023, 2026, 2029) and attainment year (2031), CARB also relied upon the same growth and control factors as the 2016 AQMP.

Documentation for the South Coast RFP baseline and milestone emissions inventories is found in the 2018 SIP Update on pages 4–5, 63–65, and appendix A, pages A–31—A–35. For both sets of baseline emissions inventories (those in the 2016 AQMP and those in the 2018 SIP Update), emissions estimates reflect District rules adopted through December 2015 and CARB rules adopted through November 2015. Unlike the emissions inventories for the base year (2012) and for the attainment demonstrations in the 2016 AQMP, the RFP baseline and milestone emissions inventories only include emissions within the South Coast ozone nonattainment area and thus do not include marine emissions (*e.g.*, emissions from ocean-going vessels) beyond three nautical miles from the coastline. In contrast, the base year (2012) and attainment demonstration inventories include emissions from marine vessels out to 100 miles from the coastline.

[123] We recognize that in Table 11 the control strategy is expected to achieve a NO_X emissions level of 97 tpd by 2031 in the South Coast whereas the modeled attainment demonstration for the 2008 ozone NAAQS is based on a NO_X emissions level of 96 tpd. However, we believe that the control strategy will suffice to attain the NAAQS because a shortfall of 1 tpd of NO_X is unlikely to have a 0.001 ppm or greater impact on the 0.075 ppm model-predicted 8-hour ozone concentration in 2031 (controlled case) at the highest site (Fontana) as shown in Table 5–2 of the 2016 AQMP based on the isopleth map for the Fontana site shown on page 7 of Attachment 4 to Appendix V of the 2016 AQMP. (Note that under the control strategy in the 2016 AQMP and 2016 State Strategy, South Coast VOC emissions in 2031 are expected to be approximately 292–293 tpd based on the 2031 baseline value (362 tpd) minus the District's and CARB's aggregate emission reduction commitments by 2031.)

[124] 70 FR 12264, at 12271 (March 6, 2015).

[125] Id.

[126] 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); and 70 FR 12264, at 12271 (March 6, 2015).

[127] 40 CFR 51.1110(a)(7).

[128] 40 CFR 51.1110(b).

[129] 2018 SIP Update, RFP demonstration, section IX–B, 64 and 65.

The updated RFP demonstration for the South Coast for the 2008 ozone NAAQS is shown in Table 13. The updated RFP demonstration calculates future year VOC targets from the 2011 baseline, consistent with CAA 182(c)(2)(B)(i), which requires reductions of "at least 3 percent of baseline emissions each year;" and it substitutes NO_X reductions for VOC reductions beginning in milestone year 2020 to meet VOC emission targets.[130] For the South Coast, CARB concludes that the RFP demonstration meets the applicable requirements for each milestone year as well as the attainment year.

TABLE 13—RFP DEMONSTRATION FOR THE SOUTH COAST FOR THE 2008 OZONE NAAQS

[Summer planning inventory, tpd or percent]

	2011	2017	2020	2023	2026	2029	2031
VOC							
Baseline VOC	522.0	413.7	388.6	376.0	367.5	362.5	358.3
Required change since 2011 (VOC or NO_X), %		18%	27%	36%	45%	54%	60%
Required reductions since 2011, tpd		94.0	140.9	187.9	234.9	281.9	313.2
Target VOC level		428.0	381.1	334.1	287.1	240.1	208.8
Apparent shortfall (−)/surplus (+) in VOC		14.3	−7.5	−41.9	−80.4	−122.4	−149.5
Apparent shortfall (−)/surplus (+) in VOC, %		2.8%	−1.4%	−8.0%	−15.4%	−23.4%	−28.6%
VOC shortfall previously provided by NO_X substitution, %		0.0%	0.0%	1.4%	8.0%	15.4%	23.4%
Actual VOC shortfall (−)/surplus (+), %		2.8%	−1.4%	−6.6%	−7.4%	−8.1%	−5.2%
NO_X							
Baseline NO_X	534.3	366.2	306.5	239.0	220.9	209.9	204.9
Change in NO_X since 2011, tpd		168.1	227.9	295.3	313.4	324.4	329.4
Change in NO_X since 2011, %		31.5%	42.6%	55.3%	58.7%	60.7%	61.7%
NO_X reductions used for VOC substitution through last milestone year, %		0%	0%	1.4%	8.0%	15.4%	23.4%
NO_X reductions since 2011 available for VOC substitution in this milestone year, %		31.5%	42.6%	53.8%	50.6%	45.3%	38.2%
NO_X reductions since 2011 used for VOC substitution in this milestone year, %		0%	1.4%	6.6%	7.4%	8.1%	5.2%
NO_X reductions since 2011 surplus after meeting VOC substitution needs in this milestone year, %		31.5%	41.2%	47.2%	43.3%	37.3%	33.0%
Total shortfall for RFP		0%	0%	0%	0%	0%	0%
RFP met?		Yes	Yes	Yes	Yes	Yes	Yes

Source: Table IX–2 of the 2018 SIP Update.

3. The EPA's Review of the State's Submission

In 1997, the EPA approved a 15 percent ROP plan for the South Coast ozone nonattainment area for the 1-hour ozone NAAQS, and the South Coast nonattainment area for the 2008 ozone NAAQS is the same as the South Coast nonattainment area for the 1-hour ozone NAAQS.[131] As a result, the District and CARB have met the ROP requirements of CAA section 182(b)(1) for the South Coast and do not need to demonstrate another 15 percent reduction in VOC for this area.

Based on our review of the emissions inventory documentation in the 2016 AQMP and 2018 SIP Update, we find that CARB and the District have used the most recent planning and activity assumptions, emissions models, and methodologies in developing the RFP baseline and milestone year emissions inventories. We have also have reviewed the calculations in Table IX–2 of the 2018 SIP Update and presented in Table 13 above and find that the District and CARB have used an appropriate calculation method to demonstrate RFP. For these reasons, we have determined that the 2016 South Coast Ozone SIP demonstrates RFP in each milestone year and the attainment year, consistent with applicable CAA requirements and EPA guidance. We therefore propose to approve the RFP demonstrations for the South Coast for the 2008 ozone NAAQS under sections 172(c)(2), 182(b)(1) and 182(c)(2)(B) of the CAA and 40 CFR 51.1110(a)(2)(ii).

F. Transportation Control Strategies and Measures to Offset Emissions Increases From Vehicle Miles Traveled

1. Stationary and Regulatory Requirements

Section 182(d)(1)(A) of the Act requires, in relevant part, the state, if subject to its requirements for a given area, to "submit a revision that identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips in such area." [132] Herein, we use "VMT" to refer to vehicle miles traveled and refer to the related SIP requirement as the "VMT emissions offset requirement." In addition, we refer to the SIP revision intended to demonstrate compliance with the VMT emissions offset requirement as the "VMT emissions offset demonstration."

In *Association of Irritated Residents* v. *EPA*, the United States Court of Appeals for the Ninth Circuit ("Court") ruled that additional transportation control measures are required whenever vehicle emissions are projected to be higher than they would have been had VMT not increased, even when aggregate

[130] NO_X substitution is permitted under EPA regulations. See 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); and 70 FR 12264, at 12271 (March 6, 2015).

[131] 62 FR 1150, at 1183 (January 8, 1997).

[132] CAA section 182(d)(1)(A) includes three separate elements. In short, under section 182(d)(1)(A), states are required to adopt transportation control strategies and measures to offset growth in emissions from growth in VMT, and, as necessary, in combination with other emission reduction requirements, to demonstrate RFP and attainment. For more information on the EPA's interpretation of the three elements of section 182(d)(1)(A). See 77 FR 58067, at 58068 (September 19, 2012) (proposed withdrawal of approval of South Coast VMT emissions offset demonstrations). In section III.F of this document, we are addressing the first element of CAA section 182(d)(1)(A) (*i.e.*, the VMT emissions offset requirement). In sections III.E and D of this document, we are proposing to approve the RFP and attainment demonstrations, respectively, for the 2008 ozone NAAQS in the South Coast, and compliance with the second and third elements of section 182(d)(1)(A) is predicated on final approval of the RFP and attainment demonstrations.

vehicle emissions are actually decreasing.[133] In response to the Court's decision, in August 2012, the EPA issued a memorandum titled "Guidance on Implementing Clean Air Act Section 182(d)(1)(A): Transportation Control Measures and Transportation Control Strategies to Offset Growth in Emissions Due to Growth in Vehicle Miles Travelled" (herein referred to as the "August 2012 guidance").[134]

The August 2012 guidance discusses the meaning of "transportation control strategies" (TCSs) and "transportation control measures" (TCMs) and recommends that both TCSs and TCMs be included in the calculations made for the purpose of determining the degree to which any hypothetical growth in emissions due to growth in VMT should be offset. Generally, TCSs is a broad term that encompasses many types of controls including, for example, motor vehicle emission limitations, I/M programs, alternative fuel programs, other technology-based measures, and TCMs, that would fit within the regulatory definition of "control strategy."[135] TCMs are defined at 40 CFR 51.100(r) as meaning "any measure that is directed toward reducing emissions of air pollutants from transportation sources. Such measures include, but are not limited to those listed in section 108(f) of the Clean Air Act[,]." TCMs generally refer to programs intended to reduce the VMT, the number of vehicle trips, or traffic congestion, such as programs for improved public transit, designation of certain lanes for passenger buses and high-occupancy vehicles, and trip reduction ordinances.

The August 2012 guidance explains how states may demonstrate that the VMT emissions offset requirement is satisfied in conformance with the Court's ruling. States are recommended to estimate emissions for the nonattainment area's base year and the attainment year. One emission inventory is developed for the base year, and three different emissions inventory scenarios are developed for the attainment year. For the attainment year, the state would present three emissions estimates, two of which would represent hypothetical emissions scenarios that would provide the basis to identify the "growth in emissions" due solely to the growth in VMT, and one that would represent projected actual motor vehicle emissions after fully accounting for projected VMT growth and offsetting emissions reductions obtained by all creditable TCSs and TCMs. See the August 2012 guidance for specific details on how states might conduct the calculations.

The base year on-road VOC emissions should be calculated using VMT in that year, and it should reflect all enforceable TCSs and TCMs in place in the base year. This would include vehicle emissions standards, state and local control programs, such as I/M programs or fuel rules, and any additional implemented TCSs and TCMs that were already required by or credited in the SIP as of that base year.

The first of the emissions calculations for the attainment year would be based on the projected VMT and trips for that year and assume that no new TCSs or TCMs beyond those already credited in the base year inventory have been put in place since the base year. This calculation demonstrates how emissions would hypothetically change if no new TCSs or TCMs were implemented, and VMT and trips were allowed to grow at the projected rate from the base year. This estimate would show the potential for an increase in emissions due solely to growth in VMT and trips. This represents a "no action" taken scenario. Emissions in the attainment year in this scenario may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced through fleet turnover; however, provided VMT and/or numbers of vehicle trips will in fact increase by the attainment year, they would still likely be higher than they would have been assuming VMT had held constant.

The second of the attainment year's emissions calculations would assume that no new TCSs or TCMs beyond those already credited have been put in place since the base year, but it would also assume that there was no growth in VMT and trips between the base year and attainment year. This estimate reflects the hypothetical emissions level that would have occurred if no further TCMs or TCSs had been put in place and if VMT and trip levels had held constant since the base year. Like the "no action" attainment year estimate described above, emissions in the attainment year may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced by cleaner vehicles through fleet turnover, but in this case they would not be influenced by any growth in VMT or trips. This emissions estimate would reflect a ceiling on the attainment emissions that should be allowed to occur under the statute as interpreted by the Court because it shows what would happen under a scenario in which no offsetting TCSs or TCMs have yet been put in place and VMT and trips are held constant during the period from the area's base year to its attainment year. This represents a "VMT offset ceiling" scenario. These two hypothetical status quo estimates are necessary steps in identifying the target level of emissions from which states would determine whether further TCMs or TCSs, beyond those that have been adopted and implemented in reality, would need to be adopted and implemented in order to fully offset any increase in emissions due solely to VMT and trips identified in the "no action" scenario.

Finally, the state would present the emissions that are actually expected to occur in the area's attainment year after taking into account reductions from all enforceable TCSs and TCMs that in reality were put in place after the baseline year. This estimate would be based on the VMT and trip levels expected to occur in the attainment year (*i.e.,* the VMT and trip levels from the first estimate) and all of the TCSs and TCMs expected to be in place and for which the SIP will take credit in the area's attainment year, including any TCMs and TCSs put in place since the base year. This represents the "projected actual" attainment year scenario. If this emissions estimate is less than or equal to the emissions ceiling that was established in the second of the attainment year calculations, the TCSs or TCMs for the attainment year would be sufficient to fully offset the identified hypothetical growth in emissions.

If, instead, the estimated projected actual attainment year emissions are still greater than the ceiling which was established in the second of the attainment year emissions calculations, even after accounting for post-baseline year TCSs and TCMs, the state would need to adopt and implement additional TCSs or TCMs to further offset the growth in emissions. The additional TCSs or TCMs would need to bring the actual emissions down to at least the "had VMT and trips held constant" ceiling estimated in the second of the attainment year calculations, in order to meet the VMT offset requirement of section 182(d)(1)(A) as interpreted by the Court.

[133] *See Association of Irritated Residents* v. *EPA,* 632 F.3d. 584, at 596–597 (9th Cir. 2011), reprinted as amended on January 27, 2012, 686 F.3d 668, further amended February 13, 2012 (*"Association of Irritated Residents"*).

[134] Memorandum dated August 30, 2012, Karl Simon, Director, Transportation and Climate Division, Office of Transportation and Air Quality, to Carl Edland, Director, Multimedia Planning and Permitting Division, EPA Region 6, and Deborah Jordan, Director, Air Division, EPA Region 9.

[135] See, *e.g.,* 40 CFR 51.100(n).

2. Summary of State's Submission

CARB prepared the VMT emissions offset demonstration for the South Coast for the 2008 ozone NAAQS, and the District included it in 2016 AQMP as appendix VI–E ("VMT Offset Demonstration"). In addition to the VMT emissions offset demonstration, appendix VI–E of the 2016 AQMP includes two attachments—one listing the TCSs adopted by CARB since 1990 and another listing the TCMs developed by SCAG (as of September 2014) in the South Coast region that are subject to timely implementation reporting requirements.

For the VMT emissions offset demonstration, CARB used EMFAC2014, the latest EPA-approved motor vehicle emissions model for California. The EMFAC2014 model estimates the on-road emissions from two combustion processes (*i.e.*, running exhaust and start exhaust) and four evaporative processes (*i.e.*, hot soak, running losses, diurnal losses, and resting losses). The EMFAC2014 model combines trip-based VMT data from the regional transportation planning agency (*i.e.*, SCAG), starts data based on household travel surveys, and vehicle population data from the California Department of Motor Vehicles. These sets of data are combined with corresponding emission rates to calculate emissions.

Emissions from running exhaust, start exhaust, hot soak, and running losses are a function of how much a vehicle is driven. Emissions from these processes are thus directly related to VMT and vehicle trips, and CARB included emissions from them in the calculations that provide the basis for the South Coast VMT emissions offset demonstration. CARB did not include emissions from resting loss and diurnal loss processes in the analysis because such emissions are related to vehicle population, not to VMT or vehicle trips, and thus are not part of "any growth in emissions from growth in vehicle miles traveled or numbers of vehicle trips in such area" under CAA section 182(d)(1)(A).

The South Coast VMT emissions offset demonstration uses 2012 as the "base year." The base year for VMT emissions offset demonstration purposes should generally be the same base year used for nonattainment planning purposes. In section III.A of this document, the EPA is proposing to approve the 2012 base year inventory for the South Coast for the purposes of the 2008 ozone NAAQS, and thus, CARB's selection of 2012 as the base year for the South Coast VMT emissions offset demonstration for the 2008 ozone NAAQS is appropriate.

The South Coast VMT emissions offset demonstration also includes the previously described three different attainment year scenarios (*i.e.*, no action, VMT offset ceiling, and projected actual). The 2016 AQMP provides a demonstration of attainment of the 2008 ozone NAAQS in the South Coast by the applicable attainment date, based on the controlled 2031 emissions inventory. As described in section III.D of this document, the EPA is proposing to approve the attainment demonstration for the 2008 ozone NAAQS for the South Coast, and thus, we find CARB's selection of year 2031 as the attainment year for the VMT emissions offset demonstration for the 2008 ozone NAAQS to be acceptable.

Table 14 summarizes the relevant distinguishing parameters for each of the emissions scenarios and shows CARB's corresponding VOC emissions estimates for the demonstration for the 2008 ozone NAAQS.

TABLE 14—VMT EMISSIONS OFFSET INVENTORY SCENARIOS AND RESULTS FOR 2008 OZONE NAAQS

Scenario	VMT		Starts		Controls	VOC Emissions
	Year	1000/day	Year	1000/day	Year	tpd
Base Year	2012	380,248	2012	69,789	2012	138
No Action	2031	408,964	2031	78,894	2012	64
VMT Offset Ceiling	2031	380,248	2012	69,789	2012	61
Projected Actual	2031	408,964	2031	78,894	2031	40

Source: 2016 AQMP, Appendix VI–E.

For the base year scenario, CARB ran the EMFAC2014 model for the applicable base year (*i.e.*, 2012 for the 2008 ozone NAAQS) using VMT and starts data corresponding to that year. As shown in Table 14, CARB estimates the South Coast VOC emissions at 138 tpd in 2012.

For the "no action" scenario, CARB first identified the on-road motor vehicle control programs (*i.e.*, TCSs or TCMs) put in place since the base year and incorporated into EMFAC2014 and then ran EMFAC2014 with the VMT and starts data corresponding to the applicable attainment year (*i.e.*, 2031 for the 2008 ozone NAAQS) without the emissions reductions from the on-road motor vehicle control programs put in place after the base year. Thus, the no action scenario reflects the hypothetical VOC emissions that would occur in the attainment year in the South Coast if the CARB had not put in place any additional TCSs or TCMs after 2012. As shown in Table 14, CARB estimates the "no action" South Coast VOC emissions at 64 tpd in 2031.

For the "VMT offset ceiling" scenario, CARB ran the EMFAC2014 model for the attainment years but with VMT and starts data corresponding to base year values. Like the no action scenario, the EMFAC2014 model was adjusted to reflect the VOC emissions levels in the attainment years without the benefits of the post-base-year on-road motor vehicle control programs. Thus, the VMT offset ceiling scenario reflects hypothetical VOC emissions in the South Coast if CARB had not put in place any TCSs or TCMs after the base year and if there had been no growth in VMT or vehicle trips between the base year and the attainment year.

The hypothetical growth in emissions due to growth in VMT and trips can be determined from the difference between the VOC emissions estimates under the "no action" scenario and the corresponding estimates under the "VMT offset ceiling" scenario. Based on the values in Table 14, the hypothetical growth in emissions due to growth in VMT and trips in the South Coast would have been 3 tpd (*i.e.*, 64 tpd minus 61 tpd). This hypothetical difference establishes the level of VMT growth-caused emissions that need to be offset by the combination of post-baseline year TCMs and TCSs and any necessary additional TCMs and TCSs.

For the "projected actual" scenario calculation, CARB ran the EMFAC2014 model for the attainment year with VMT

and starts data at attainment year values and with the full benefits of the relevant post-baseline year motor vehicle control programs. For this scenario, CARB included the emissions benefits from TCSs and TCMs put in place since the base year. The most significant measures reducing VOC emissions during the 2012 to 2031 timeframe include the Advanced Clean Cars program, ZEV requirements, and more stringent on-board diagnostics requirements.[136]

As shown in Table 14, the projected actual attainment-year VOC emissions is 40 tpd. CARB then compared this value against the corresponding VMT offset ceiling value to determine whether additional TCMs or TCSs would need to be adopted and implemented in order to offset any increase in emissions due solely to VMT and trips. Because the projected actual emissions are less than the corresponding VMT offset ceiling emissions, CARB concluded that the demonstration shows compliance with the VMT emissions offset requirement and that there are sufficient adopted TCSs and TCMs to offset the growth in emissions from the growth in VMT and vehicle trips in the South Coast for the 2008 ozone NAAQS.

3. The EPA's Review of the State's Submission

Based on our review of revised South Coast VMT emissions offset demonstration in appendix VI–E of the 2016 AQMP, we find CARB's analysis to be consistent with our August 2012 guidance and consistent with the emissions and vehicle activity estimates found elsewhere in the 2016 AQMP. We agree that CARB and SCAG have adopted sufficient TCSs and TCMs to offset the growth in emissions from growth in VMT and vehicle trips in the South Coast for the purposes of the 2008 ozone NAAQS. As such, we propose to approve the South Coast VMT emissions offset demonstration element of the 2016 South Coast Ozone SIP as meeting the requirements of CAA section 182(d)(1)(A).

G. Contingency Measures

1. Statutory and Regulatory Requirements

Under the CAA, 8-hour ozone nonattainment areas classified under subpart 2 as Moderate or above must include in their SIPs contingency measures consistent with sections 172(c)(9) and 182(c)(9). Contingency measures are additional controls or measures to be implemented in the event the area fails to make reasonable further progress or to attain the NAAQS by the attainment date. The SIP should contain trigger mechanisms for the contingency measures, specify a schedule for implementation, and indicate that the measure will be implemented without significant further action by the state or the EPA.[137]

Neither the CAA nor the EPA's implementing regulations establish a specific level of emissions reductions that implementation of contingency measures must achieve, but the EPA's 2008 Ozone SRR reiterates the EPA's policy that contingency measures should provide for emissions reductions approximately equivalent to one year's worth progress, amounting to reductions of 3 percent of the baseline emissions inventory for the nonattainment area.[138]

It has been the EPA's longstanding interpretation of section 172(c)(9) that states may rely on federal measures (*e.g.,* federal mobile source measures based on the incremental turnover of the motor vehicle fleet each year) and local measures already scheduled for implementation that provide emissions reductions in excess of those needed to provide for RFP or expeditious attainment. The key is that the statute requires that contingency measures provide for additional emissions reductions that are not relied on for RFP or attainment and that are not included in the RFP or attainment demonstrations as meeting part or all of the contingency measure requirements. The purpose of contingency measures is to provide continued emissions reductions while the plan is being revised to meet the missed milestone or attainment date.

The EPA has approved numerous SIPs under this interpretation—*i.e.,* SIPs that use as contingency measures one or more federal or local measures that are in place and provide reductions that are in excess of the reductions required by the attainment demonstration or RFP plan,[139] and there is case law supporting the EPA's interpretation in this regard.[140] However, in *Bahr* v. *EPA,* the Ninth Circuit rejected the EPA's interpretation of CAA section 172(c)(9) as allowing for early implementation of contingency measures.[141] The Ninth Circuit concluded that contingency measures must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.[142] Thus, within the geographic jurisdiction of the Ninth Circuit, states cannot rely on early-implemented measures to comply with the contingency measure requirements under CAA section 172(c)(9) and 182(c)(9).[143]

With respect to Extreme ozone nonattainment areas, CAA section 182(e)(5) allows the agency to exercise discretion in approving Extreme area attainment plans that rely, in part, on the future development of new control technologies or improvements of existing control technologies, where certain conditions are met. Among the conditions to qualify for reliance on section 182(e)(5) is the requirement that the state submit enforceable commitments to timely develop and adopt contingency measures to be implemented if the anticipated future technologies do not achieve planned reductions. Contingency measures submitted to comply with commitments made for the purposes of section 182(e)(5) differ in substance from contingency measures submitted to comply with sections 172(c)(9) and 182(c)(9) in that the former addresses a potential failure to meet an emissions reduction target whereas the latter address a potential failure to meet an ambient concentration target (*i.e.,* in this case, the 2008 ozone NAAQS). However, in our 2008 Ozone SRR, we recognized the inherent difficulty in identifying specific contingency measures to be triggered upon a failure to attain the NAAQS by the applicable attainment date in Extreme nonattainment areas that rely on the new technology provisions in section 182(e)(5) to demonstrate attainment, and thus, we allow states to submit, for such

[136] Attachment V–E–1 to appendix VI of the 2016 AQMP includes a list of the State's transportation control strategies adopted by CARB since 1990. Also see EPA final action on CARB mobile source SIP submittals at 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

[137] 70 FR 71612 (November 29, 2005). See also 2008 Ozone SRR, 80 FR 12264, at 12285 (March 6, 2015).

[138] 80 FR 12264 at 12285 (March 6, 2015).

[139] See, *e.g.,* 62 FR 15844 (April 3, 1997) (direct final rule approving an Indiana ozone SIP revision); 62 FR 66279 (December 18, 1997) (final rule approving an Illinois ozone SIP revision); 66 FR 30811 (June 8, 2001) (direct final rule approving a Rhode Island ozone SIP revision); 66 FR 586 (January 3, 2001) (final rule approving District of Columbia, Maryland, and Virginia ozone SIP revisions); and 66 FR 634 (January 3, 2001) (final rule approving a Connecticut ozone SIP revision).

[140] See, *e.g.,* *LEAN* v. *EPA,* 382 F.3d 575 (5th Cir. 2004) (upholding contingency measures that were previously required and implemented where they were in excess of the attainment demonstration and RFP SIP).

[141] *Bahr* v. *EPA,* 836 F.3d 1218, at 1235–1237 (9th Cir. 2016).

[142] Id. at 1235–1237.

[143] The *Bahr* v. *EPA* decision involved a challenge to an EPA approval of contingency measures under the general nonattainment area plan provisions for contingency measures in CAA section 172(c)(9), but, given the similarity between the statutory language in section 172(c)(9) and the ozone-specific contingency measure provision in section 182(c)(9), we find that the decision affects how both sections of the Act must be interpreted.

areas, enforceable commitments to develop and adopt contingency measures meeting the requirements of section 182(e)(5) to satisfy the requirements for both attainment contingency measures in CAA sections 172(c)(9) and 182(c)(9).[144] These enforceable commitments must obligate the state to submit the required contingency measures (*i.e.*, contingency measures to be triggered if the emissions reduction target under section 182(e)(5) is not met and contingency measures to be triggered if the area fails to attain the NAAQS by the applicable attainment date) to the EPA no later than three years before any applicable implementation date, in accordance with section 182(e)(5).[145]

2. Summary of the State's Submission

The District and CARB had largely prepared the 2016 AQMP prior to the *Bahr* v. *EPA* decision, and thus, it relies solely upon surplus emissions reductions from already implemented control measures in the RFP milestone years to demonstrate compliance with the RFP milestone contingency measure requirements of CAA sections 172(c)(9) and 182(c)(9).[146] Because the attainment demonstration for the 2008 ozone NAAQS relies on CAA section 182(e)(5) reductions in the 2016 State Strategy, CARB has submitted a commitment to develop, adopt, and submit contingency measures by 2028 if the section 182(e)(5) measures do not achieve planned reductions.[147] More recently, in a letter from CARB dated May 20, 2019, CARB clarified that the commitment to submit contingency measures as needed to address shortfalls in the emissions reductions anticipated by new technology measures under section 182(e)(5) also includes a commitment to submit by 2028 contingency measures to be triggered upon a failure to attain the 2008 ozone NAAQS in the South Coast by the applicable attainment date as required under sections 172(c)(9) and 182(c)(9).[148]

In the 2018 SIP Update, CARB revises the RFP demonstration for the 2008 ozone NAAQS for the South Coast and recalculates the extent of surplus emission reductions (*i.e.*, surplus to meeting the RFP milestone requirement for a given milestone year) in the milestone years. In light of the *Bahr* v. *EPA* decision, however, the 2018 SIP Update does not rely on the surplus or incremental emissions reductions to comply with the contingency measures requirements of sections 172(c)(9) and 182(c)(9) but, to provide context in which to review contingency measures for the 2008 ozone NAAQS, the 2018 SIP Update documents the extent to which future baseline emissions would provide surplus emissions reductions beyond those required to meet applicable RFP milestones.[149] More specifically, the 2018 SIP Update identifies one year's worth of RFP as approximately 16 tpd and estimates surplus NO_X reductions as ranging from approximately 170 tpd to 250 tpd depending upon the particular RFP milestone year.

To comply with sections 172(c)(9) and 182(c)(9), as interpreted in the *Bahr* v. *EPA* decision, the state must develop, adopt and submit a contingency measure to be triggered upon a failure to meet RFP milestones or failure to attain the NAAQS by the applicable attainment date regardless of the extent to which already-implemented measures would achieve surplus emissions reductions beyond those necessary to meet RFP milestones and beyond those predicted to achieve attainment of the NAAQS. Therefore, to fully address the contingency measure requirement for the 2008 ozone NAAQS in the South Coast, the District has committed to develop, adopt and submit a contingency measure to CARB in sufficient time to allow CARB to submit the contingency measure as a SIP revision to the EPA within 12 months of the EPA's final conditional approval of the contingency measure element of the 2016 South Coast Ozone SIP.[150] The District's specific commitment is to modify one (or more) existing rule, or adopt a new rule or rules, that would include a more stringent requirement or remove an exemption if the EPA determines that the South Coast nonattainment area has missed an RFP milestone for the 2008 ozone NAAQS. More specifically, the District has identified a list of 12 different rules that the District is reviewing for inclusion of potential contingency provisions. The rules and the types of revisions under review for contingency purposes include: New Rule 1109.1 (NO_X Emission Reductions From Refinery Equipment) (contingency to remove an exemption (*e.g.*, low-use exemption) for a specific refinery equipment category); existing Rule 1110.2 (Emissions from Gaseous- and Liquid-Fueled Engines) (contingency to remove exemptions for orchard wind machines powered by internal combustion engines and agricultural stationary engines); and existing Rule 1117 (Emissions of Oxides of Nitrogen from Glass Melting Furnaces) (contingency to remove exemptions for idling furnaces and furnaces used in the melting of glass for the production of fiberglass exclusively), among others.

CARB has attached the District's commitment to revise a rule to a letter committing to adopt and submit the revised rule to the EPA within one year of the EPA's final action on the contingency measure element of the 2016 South Coast Ozone Plan.[151]

3. The EPA's Review of the State's Submission

Sections 172(c)(9) and 182(c)(9) require contingency measures to address potential failure to achieve RFP milestones or failure to attain the NAAQS by the applicable attainment date. For the purposes of evaluating the contingency measure element of the 2016 South Coast Ozone SIP, we find it useful to distinguish between contingency measures to address potential failure to achieve RFP milestones ("RFP contingency measures") and contingency measures to address potential failure to attain the NAAQS ("attainment contingency measures").

With respect to the RFP contingency measure requirement, we have reviewed the surplus emissions estimates in each of the RFP milestone years, as shown in the 2018 SIP Update, and find that the calculations are correct. We therefore agree that the 2016 South Coast Ozone SIP provides surplus emissions reductions well beyond those necessary to demonstrate RFP in all of the RFP milestone years. While such surplus emissions reductions in the RFP milestone years do not represent contingency measures themselves, we believe they are relevant in evaluating the adequacy of RFP contingency measures that are submitted (or will be submitted) to meet the requirements of sections 172(c)(9) and 182(c)(9).

In this case, the District and CARB have committed to develop, adopt and submit a revised District rule or rules, or a new rule or rules, as an RFP contingency measure within one year of our final action on the 2016 South Coast Ozone SIP. The specific types of

[144] 80 FR 12264, at 12285–12286 (March 6, 2015).

[145] Id.

[146] 2016 AQMP, 4–51 and 4–52; appendix VI–C, pages V–C–1—V–C–4.

[147] CARB Board Resolution 7–18, 9.

[148] Letter dated May 20, 2019, from Michael Benjamin, CARB, to Amy Zimpfer, EPA Region IX.

[149] 2018 SIP Update, chapter IX, tables IX–2, IX–5 and IX–6.

[150] Letters dated January 29, 2019 and May 2, 2019, from Wayne Nastri, SCAQMD Executive Officer, to Richard Corey, Executive Officer, CARB.

[151] Letters dated February 13, 2019, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX, and May 20, 2019, from Michael Benjamin, CARB, to Amy Zimpfer, EPA Region IX.

revisions the District has committed to make, such as increasing the stringency of an existing requirement or removing an exemption, upon an RPF milestone failure would comply with the requirements in CAA sections 172(c)(9) and 182(c)(9) because they would be undertaken if the area fails to meet an RFP milestone and would take effect without significant further action by the state or the EPA.

Next, we considered the adequacy of the RFP contingency measure (once adopted and submitted) from the standpoint of the magnitude of emissions reductions the measure would provide (if triggered). Neither the CAA nor the EPA's implementing regulations for the ozone NAAQS establish a specific amount of emissions reductions that implementation of contingency measures must achieve, but we generally expect that contingency measures should provide for emissions reductions approximately equivalent to one year's worth of RFP, which, for ozone, amounts to reductions of 3 percent of the baseline emissions inventory for the nonattainment area. For the 2008 ozone NAAQS in the South Coast, one year's worth of RFP is approximately 16 tpd of VOC or NO_X reductions.[152]

In this instance, because of the nature of the District's intended contingency measure (*i.e.*, to modify an existing rule or rules to increase the stringency or to remove an exemption), the District did not quantify the potential additional emission reductions from its contingency measure commitment, but we believe that it is unlikely that the RFP contingency measure, once adopted and submitted, will achieve one year's worth of RFP (*i.e.*, 16.0 tpd of NO_X or VOC) given the types of rule revisions under consideration and the magnitude of emissions reductions constituting one year's worth of RFP. However, the 2018 SIP Update provides the larger SIP planning context in which to judge the adequacy of the to-be-submitted District contingency measure by calculating the surplus emissions reductions estimated to be achieved in the RFP milestone years. More specifically, Table IX–2 in the 2018 SIP Update identified surplus NO_X reductions in the various RFP milestone years. For the South Coast, the estimates of surplus NO_X reductions vary for each RFP milestone year but range from a minimum of 31.5 percent in milestone year 2017 to 47.2 percent in milestone year 2023.[153] These represent values that far eclipse one year's worth of RFP (approximately 16 tpd or 3 percent) and that provide the basis to conclude that the risk of any failure to achieve an RFP milestone for the 2008 ozone NAAQS in the South Coast is very low. The surplus reflects already implemented regulations and is primarily the result of vehicle turnover, which refers to the ongoing replacement by individuals, companies, and government agencies of older, more polluting vehicles and engines with newer vehicles and engines designed to meet more stringent CARB mobile source emission standards. In light of the extent of surplus NO_X emissions reductions in the RFP milestone years, the emissions reductions from the District contingency measure would be sufficient to meet the contingency measure requirements of the CAA with respect to RFP milestones, even though the measure would likely achieve emissions reductions lower than the EPA normally recommends for reductions from such a measure.

With respect to the attainment contingency measure requirement, we are proposing to approve the attainment demonstration for the 2008 Ozone NAAQS in the 2016 South Coast Ozone SIP that relies in part on new technology provisions under CAA section 182(e)(5). In connection with the proposed approval of the attainment demonstration, we are proposing to approve CARB's commitment to develop, adopt and submit contingency measures by 2028 (three years prior to the attainment year) if new technology measures do not achieve planned reductions. CARB has clarified that the commitment to submit contingency measures as necessary to address shortfalls in emissions reductions from new technology measures also includes a commitment to submit attainment contingency measures.

The EPA allows states to submit, for Extreme areas, enforceable commitments to develop and adopt contingency measures meeting the requirements of section 182(e)(5) to satisfy the requirements for both attainment contingency measures in CAA sections 172(c)(9) and 182(c)(9).[154] We find that CARB's commitment, as clarified by CARB to include attainment contingency measures, provides an adequate basis to defer submittal of attainment contingency measures for the South Coast for the 2008 ozone NAAQS until 2028.

For the these reasons, we propose to approve conditionally the RFP contingency measure element of the 2016 South Coast Ozone SIP as supplemented by commitments from the District and CARB to adopt and submit an additional contingency measure, to meet the RFP contingency measure requirements of CAA sections 172(c)(9) and 182(c)(9). Our proposed approval is conditional because it relies upon commitments to adopt and submit a specific enforceable contingency measure (*i.e.*, a revised or new District rule or rules with contingent provisions). Conditional approvals are authorized under CAA section 110(k)(4) of the CAA. We also propose to find that CARB's commitment to submit attainment contingency measures provides an adequate basis to defer submittal of attainment contingency measures meeting the requirements in CAA sections 172(c)(9) and 182(c)(9) until 2028.

H. Clean Fuels or Advanced Control Technology for Boilers

1. Statutory and Regulatory Requirements

Section 182(e)(3) of the CAA provides that SIPs for Extreme nonattainment areas require each new, modified, and existing electric utility and industrial and commercial boiler that emits more than 25 tpy of NO_X to either burn as its primary fuel natural gas, methanol, or ethanol (or a comparably low-polluting fuel), or use advanced control technology, such as catalytic control technologies or other comparably effective control methods.

Additional guidance on this requirement is provided in the General Preamble at 13523. In the General Preamble, the EPA states that, for the purposes of CAA section 182(a)(3), a boiler should generally be considered as any combustion equipment used to produce steam and generally does not include a process heater that transfers heat from combustion gases to process streams.[155] In addition, boilers with rated heat inputs less than 15 million British thermal units (MMBtu) per hour that are oil- or gas-fired may generally be considered *de minimis* and exempt from these requirements because it is unlikely that they will exceed the 25 tpy NO_X emission limit.[156]

2. Summary of the State's Submission

The 2016 AQMP discusses compliance with the requirements of CAA section 182(e)(3) by reference to

[152] The 2011 baseline for NO_X and VOC is 534.3 tpd and 522.0 tpd, respectively, as shown in tables IX–1 and IX–2 of the 2018 SIP Update. Three percent of the baselines is 16.0 tpd of NO_X and 15.7 tpd of VOC, respectively.

[153] 2018 SIP Update, Table IX–2.

[154] 80 FR 12264, at 12285–12286 (March 6, 2015)

[155] See General Preamble, 57 FR 13498 at 13523 (April 16, 1992).

[156] Id at 13524.

District Rules 2002 ("Allocations for Oxides of Nitrogen (NO_X) and Oxides of Sulfur (SO_X)"), 1146 ("Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters") and 1303 ("Requirements").[157] In the 2016 AQMP, the District notes that, under District Rule 1303, a new or modified boiler emitting at least 10 tpy of NO_X or VOC is required to employ best available control technology (BACT), which, under the District's rule, must be at least as stringent as the lowest achievable emission rate (LAER) as defined in CAA section 171(3).

In February 2019, the District further clarified that, with respect to sources subject to the District's Regulation XX ("Regional Clean Air Incentives Market" or "RECLAIM"), compliance with CAA section 182(e)(3) is provided through District Rule 2004 ("Requirements"), paragraph (h), which requires each new, modified and existing electric utility and industrial and commercial boiler emitting more than 25 tpy per year of NO_X to burn clean fuel or use advanced control technology.[158]

The District's February 2019 letter also provided analysis reviewing emission reports from boilers in its annual emissions reporting system from 2015, 2016, and 2017. This analysis found that there was only one unit emitting more than 25 tpy of NO_X not already meeting the clean fuel requirement: The Los Angeles County Sanitation District Landfill in Puente Hills. This facility is subject to NO_X emissions limits in District Rule 1146.

3. The EPA's Review of the State's Submission

Currently, within the South Coast, boilers that are subject to the requirements of CAA section 182(e)(3) fall into two broad categories: (1) Boilers that are subject to the District's RECLAIM regulation, and (2) boilers that are not subject to RECLAIM. Boilers that are subject to RECLAIM must comply with District Rule 2004, paragraph (h), that sets forth requirements that essentially mirror those set forth in CAA section 182(e)(3). Thus we agree with the District that Rule 2004(h) satisfies the SIP requirement in CAA section 182(e)(3) with respect to boilers included in the RECLAIM program. We most recently approved Rule 2004 into the SIP at 73 FR 38122 (July 3, 2008).

As to boilers that are not subject to RECLAIM, for the reasons given below, we agree with the District that the requirements are met through implementation of District Rule 1146 for existing boilers and through implementation of District Regulation XIII ("New Source Review"), specifically, Rule 1303, for new and modified boilers. We approved District Rules 1146 and 1303 into the SIP at 79 FR 57442 (September 25, 2014) and 61 FR 64291 (December 4, 1996), respectively.

First, we have reviewed Rule 1146 and find that it applies to boilers of equal to or greater than 5 MMBtu per hour heat rate input capacity used in all industrial, institutional, and commercial operations with the exception of RECLAIM facilities.[159] That is, it regulates large boilers in the South Coast not participating in the RECLAIM program. Rule 1146 requires compliance with specified numeric limits that are based on the type of unit, and it allows for combustion of fuel that may not necessarily be natural gas, methanol, ethanol, or other comparably low polluting fuel. The emission limits for these other fuels, includes units fired on digester or landfill gas, are 15 ppm by volume and 25 ppm by volume, respectively. According to the District's analysis as noted above, the only unit firing on these fuels that also must comply with the requirements of CAA section 182(e)(3) is the Los Angeles County Sanitation District Landfill in Puente Hills, which combusts recovered landfill gas and must achieve the limits for landfill gas-fired units as required in District Rule 1146.

Second, we have reviewed District Rule 1303 and find that it provides for denial of a permit to construct for any new or modified source that results in an emission increases of any nonattainment pollutants unless BACT is employed for the new or modified source.[160] The District defines BACT in essentially the same way as the CAA section 171(3) defines LAER.[161] District Rule 1303 thus ensures that new or modified boilers in the South Coast that are not subject to RECLAIM comply with the requirements in CAA section 182(e)(3).

For the reasons given above, we find that the requirements for new, modified and existing boilers in approved District Rules 1303, 1146 and 2004 satisfy the clean fuel or advanced control technology for boilers requirement in CAA section 182(e)(3), and based on this finding, we propose to approve the clean fuels for boilers element of the 2016 South Coast Ozone SIP.

I. Motor Vehicle Emissions Budgets for Transportation Conformity

1. Statutory and Regulatory Requirements

Section 176(c) of the CAA requires federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving timely attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) Cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, MPOs in nonattainment and maintenance areas coordinate with state and local air quality and transportation agencies, the EPA, the FHWA, and the FTA to demonstrate that an area's regional transportation plans and transportation improvement programs conform to the applicable SIP. This demonstration is typically done by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (MVEBs or "budgets") contained in all control strategy SIPs. Budgets are generally established for specific years and specific pollutants or precursors. Ozone plans should identify budgets for on-road emissions of ozone precursors (NO_X and VOC) in the area for each RFP milestone year and the attainment year, if the plan demonstrates attainment.[162]

For budgets to be approvable, they must meet, at a minimum, the EPA's adequacy criteria (40 CFR 93.118(e)(4)). To meet these requirements, the budgets must be consistent with the attainment and RFP requirements and reflect all of the motor vehicle control measures

[157] See tables 6–1 and 6–2 of chapter 6 of the 2016 AQMP.

[158] See letter dated February 13, 2019, from Philip Fine, Ph.D., Deputy Executive Officer, SCAQMD, to Elizabeth Adams, Director, Air Division, EPA Region IX.

[159] We note that the applicability section of Rule 1146 lists certain categories of sources that are not subject to its requirements in addition to RECLAIM facilities, such as boilers used by electric utilities to generate electricity and large boilers used in petroleum refineries. However, the types of boilers that are categorically excepted by Rule 1146 are in fact included in the RECLAIM program in the South Coast and thus are subject to Rule 2004(h), which provides for compliance with CAA section 182(e)(3).

[160] District Rule 1303(a).

[161] District Rule 1302 ("Definitions"), paragraph (f) ("Best Available Control Technology").

[162] 40 CFR 93.102(b)(2)(i).

contained in the attainment and RFP demonstrations.[163]

The EPA's process for determining adequacy of a budget consists of three basic steps: (1) Providing public notification of a SIP submission; (2) providing the public the opportunity to comment on the budget during a public comment period; and, (3) making a finding of adequacy or inadequacy.[164]

2. Summary of the State's Submission

The 2016 AQMP included budgets for the 2018, 2021, 2024, 2027, and 2030 RFP milestone years, and the 2031 attainment year. The budgets for 2018, 2021, 2024, 2027 and 2030 were derived from the 2012 RFP baseline year and the associated RFP milestone years. As such, the budgets are affected by the *South Coast II* decision vacating the alternative baseline year provision, and therefore, the EPA has not previously acted on the budgets.

On December 5, 2018, CARB submitted the 2018 SIP Update, which revises the RFP demonstration consistent with the *South Coast II* decision (*i.e.,* by using a 2011 RFP baseline year) and identifies new budgets for the South Coast for VOC and NO_X for each updated RFP milestone year through 2030 and for the attainment year, 2031. The budgets in this 2018 SIP Update replace all of the budgets contained in the 2016 AQMP.

Like the budgets in the 2016 AQMP, the budgets in the 2018 SIP Update were calculated using EMFAC2014, CARB's latest approved version of the EMFAC model for estimating emissions from on-road vehicles operating in California, and are rounded up to the nearest whole number. However, the budgets in the 2018 SIP Update reflect updated VMT estimates from the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, Amendment 2, adopted by SCAG in July 2017. Given the use of updated travel data and CARB's convention of rounding emissions up to the nearest whole number, there are some differences between the budgets and the emissions inventories in the 2018 SIP Update for the RFP demonstration and in the 2016 AQMP for the attainment demonstration, but the differences are quite small and do not impact the RFP or attainment demonstrations.[165] The conformity budgets for NO_X and VOC in the 2018 SIP Update for the South Coast are provided in Table 15 below.

TABLE 15—TRANSPORTATION CONFORMITY BUDGETS FOR THE 2008 OZONE NAAQS IN THE SOUTH COAST

[Summer planning inventory, tpd]

Budget year	VOC	NO_X
2020	80	141
2023	68	89
2026	60	77
2029	54	69
2031	50	66

Source: Table IX–3 of the 2018 SIP Update.

3. The EPA's Review of the State's Submission

As part of our review of the approvability of the budgets in the 2018 SIP Update, we have evaluated the budgets using our adequacy criteria in 40 CFR 93.118(e)(4) and (5). We will complete the adequacy review concurrent with our final action on the 2016 South Coast Ozone SIP. The EPA is not required under its transportation conformity rule to find budgets adequate prior to proposing approval of them.[166]

As documented in Table 4 of section IV of the EPA's TSD for this proposal, we find that the budgets in the 2018 SIP Update for the South Coast meet each adequacy criterion. We have completed our detailed review of the 2016 South Coast Ozone SIP and are proposing herein to approve the SIP's attainment and RFP demonstrations. We have also reviewed the budgets in the 2018 SIP Update and found that they are consistent with the attainment and RFP demonstrations for which we are proposing approval, are based on control measures that have already been adopted and implemented, and meet all other applicable statutory and regulatory requirements including the adequacy criteria in 40 CFR 93.1118(e)(4) and (5). Therefore, we are proposing to find adequate and approve the 2020, 2023, 2026, 2029 and 2031 MVEBs in the 2018 SIP Update (and shown in Table 15, above). If we finalize our adequacy determination and approval of the budgets for the 2008 ozone NAAQS in the 2018 SIP Update, as proposed, then they will replace the budgets for the 1997 ozone NAAQS from the 2007 South Coast Ozone SIP that we previously found adequate and approved for use in transportation conformity determinations.[167]

Under our transportation conformity rule, as a general matter, once budgets are approved, they cannot be superseded by revised budgets submitted for the same CAA purpose and the same period of years addressed by the previously approved SIP until the EPA approves the revised budgets as a SIP revision. In other words, as a general matter, such approved budgets cannot be superseded by revised budgets found adequate, but rather only through approval of the revised budgets, unless the EPA specifies otherwise in its approval of a SIP by limiting the duration of the approval to last only until subsequently submitted budgets are found adequate.[168]

In this instance, CARB has requested that we limit the duration of our approval of the budgets in the 2016 South Coast Ozone SIP only until the effective date of the EPA's adequacy finding for any subsequently submitted budgets.[169] Generally, we will consider a state's request to limit an approval of a MVEB only if the request includes the following elements:[170]

- An acknowledgement and explanation as to why the budgets under consideration have become outdated or deficient;
- A commitment to update the budgets as part of a comprehensive SIP update; and
- A request that the EPA limit the duration of its approval to the time when new budgets have been found to be adequate for transportation conformity purposes.

CARB's request includes an explanation for why the budgets have

[163] 40 CFR 93.118(e)(4)(iii), (iv) and (v). For more information on the transportation conformity requirements and applicable policies on MVEBs, please visit our transportation conformity website at: *http://www.epa.gov/otaq/stateresources/transconf/index.htm.*

[164] 40 CFR 93.118(f)(2).

[165] For instance, the 2016 AQMP estimates that 2031 on-road vehicle emissions (summer planning inventory) would be 49.50 tpd for VOC and 64.99 tpd for NO_X. See attachment B to appendix III of the 2016 AQMP. The corresponding budgets from the 2018 SIP Update are 50 tpd for VOC and 66 tpd for NO_X.

[166] Under the transportation conformity regulations, the EPA may review the adequacy of submitted motor vehicle emission budgets simultaneously with the EPA's approval or disapproval of the submitted implementation plan. 40 CFR 93.118(f)(2).

[167] We found adequate and approved the MVEBs from the 2007 South Coast Ozone SIP for the 1997 ozone NAAQS at 77 FR 12674, 12693 (March 1, 2012). The MVEBs in the 2018 SIP Update for the 2008 ozone NAAQS are lower than the corresponding MVEBs approved for the 1997 ozone NAAQS. For instance, the current MVEBs of 108 tpd for VOC and 185 tpd for NO_X for 2020, and 99 tpd of VOC and 140 tpd of NO_X for 2023, would be replaced by MVEBs of 80 tpd for VOC and 141 tpd for NO_X in 2020, and 68 tpd for VOC and 89 tpd for NO_X in 2023.

[168] 40 CFR 93.118(e)(1).

[169] CARB's request to limit the duration of the approval of the South Coast ozone MVEB is contained in letters dated December 5, 2018, from Richard Corey, Executive Officer, California Air Resources Board, to Mike Stoker, Regional Administrator, EPA Region IX, and May 20, 2019, from Michael Benjamin, California Air Resources Board, to Amy Zimpfer, EPA Region IX.

[170] 67 FR 69141 (November 15, 2002), limiting our prior approval of MVEB in certain California SIPs.

become, or will become, outdated or deficient. In short, CARB has requested that we limit the duration of the approval of the budgets in anticipation, in the near term, of approval by the EPA of EMFAC2017, an updated version of the model used for the budgets in the 2016 South Coast Ozone SIP. EMFAC2017 updates vehicle mix and emissions data of the currently approved version of the model, EMFAC2014.

Preliminary calculations by CARB indicate that EMFAC2017-derived budgets for the South Coast will exceed the corresponding EMFAC2014-derived budgets in the 2016 South Coast Ozone SIP. Upon approval of EMFAC2017, CARB explains that the budgets from the 2016 South Coast Ozone SIP, for which we are proposing approval in today's action, will become outdated and will need to be revised using EMFAC2017 within the grace period established in our approval of EMFAC2017 to provide for a new conformity determination for the South Coast regional transportation plan and program. In addition, CARB states that, without the ability to replace the budgets using the budget adequacy process, the benefits of using the updated data may not be realized for a year or more after the updated SIP (with the EMFAC2017-derived budgets) is submitted, due to the length of the SIP approval process. We find that CARB's explanation for limiting the duration of the approval of the budgets is appropriate and provides us with a reasonable basis on which to limit the duration of the approval of the budgets.

We note that CARB has not committed to update the budgets as part of a comprehensive SIP update, but as a practical matter, CARB must submit a SIP revision that includes updated demonstrations as well as the updated budgets to meet the adequacy criteria in 40 CFR 93.118(e)(4);[171] and thus, we do not need a specific commitment for such a plan at this time. For the reasons provided above, and in light of CARB's explanation for why the budgets will become outdated and should be replaced upon an adequacy finding for updated budgets, we propose to limit the duration of our approval of the budgets in the 2016 South Coast Ozone SIP until new budgets have been found adequate.

[171] Under 40 CFR 93.118(e)(4), the EPA will not find a budget in a submitted SIP to be adequate unless, among other criteria, the budgets, when considered together with all other emissions sources, are consistent with applicable requirements for RFP and attainment. 40 CFR 93.118(e)(4)(iv).

J. General Conformity Budgets

1. Statutory and Regulatory Requirements

Section 176(c) of the CAA requires federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving timely attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) Cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Section 176(c)(4) of the CAA establishes the framework for general conformity. The EPA first promulgated general conformity regulations in November 1993.[172] The EPA revised the general conformity regulations on April 5, 2010 (75 FR 17254). The general conformity regulations ensure that federal actions not covered by the transportation conformity rule will not interfere with the SIP and encourage consultation between the federal agency and the state or local air pollution control agencies before or during the environmental review process, as well as public participation (*e.g.*, notification of and access to federal agency conformity determinations and review of individual federal actions).

The general conformity regulations provide three phases: Applicability analysis, conformity determination, and review process. The applicability analysis phase under 40 CFR 93.153 is used to find if a federal action requires a conformity determination for a specific pollutant. If a conformity determination is needed, federal agencies can use one of several methods to show that the project conforms to the SIP. In an area without a SIP, a federal action may be shown to "conform" by demonstrating there will be no net increase in emissions in the nonattainment or maintenance area from the federal action. In an area with a SIP, conformity to the applicable SIP can be demonstrated in one of several ways. For actions where the direct and indirect emissions exceed the rates in 40 CFR 93.153(b), the federal action can include mitigation measures to offset the emission increases from the federal action or can show that the action will conform by meeting any of the following requirements:

- Showing that the net emission increases caused by an action are included in the SIP,
- documenting that the state agrees to include the emission increases in the SIP,
- offsetting the action's emissions in the same or nearby area of equal or greater classification, or
- providing an air quality modeling demonstration in some circumstances.[173]

The general conformity regulations at 40 CFR 93.161 allow state and local air quality agencies working with federal agencies with large facilities (*e.g.*, commercial airports, ports, and large military bases) that are subject to the general conformity regulations to develop and adopt an emissions budget for those facilities in order to facilitate future conformity determinations. Such a budget, referred to as a facility-wide emission budget, may be used by federal agencies to demonstrate conformity as long as the total facility-wide budget level identified in the SIP is not exceeded.

According to 40 CFR 93.161, the state or local agency responsible for implementing and enforcing the SIP can develop and adopt an emissions budget to be used for demonstrating conformity under 40 CFR 93.158(a)(1). The requirements include the following: (1) The facility-wide budget must be for a set time period; (2) the budget must cover the pollutants or precursors of the pollutants for which the area is designated nonattainment or maintenance; (3) the budgets must be specific about what can be emitted on an annual or seasonal basis; (4) the emissions from the facility along with all other emissions in the area must not exceed the total SIP emissions budget for the nonattainment or maintenance area; (5) specific measures must be included to ensure compliance with the facility-wide budget, such as periodic reporting requirements or compliance demonstrations when the federal agency is taking an action that would otherwise require a conformity determination; (6) the budget must be submitted to the EPA as a SIP revision; and (7) the SIP revision must be approved by the EPA. Having or using a facility-wide emissions budget does not preclude a federal agency from demonstrating conformity in any other manner allowed by the conformity rule.

2. Summary of the State's Submission

The 2016 AQMP addresses general conformity budgets beginning on page VI–D–1 of Appendix VI and on pages III–2–85 through II–2–88 of Appendix

[172] 40 CFR part 51, subpart W, and 40 CFR part 93, subpart B.

[173] 40 CFR 93.158; and SCAQMD Rule 1901 ("General Conformity"), approved at 64 FR 19916 (April 23, 1999).

III. To streamline the general conformity process for federal projects and to facilitate general conformity determinations, the 2016 AQMP establishes VOC and NO_X general conformity budgets of 2.0 tpd of NO_X and 0.5 tpd of VOC on an annual basis from 2017 to 2030, and budgets of 0.5 tpd of NO_X and 0.2 tpd VOC in 2031. These general conformity budgets are included in the "set-aside" account added to baseline emissions in tables 9, 10 and 11 in section III.D.2.c of this document. The general conformity budgets in the 2016 AQMP are not set aside for specific facilities per se but were developed in the anticipation of the construction and operation of certain airport development projects in the South Coast that are expected over the next decade.

Under the 2016 AQMP, emissions from general conformity projects will be tracked by the District tracking system and debited from this set-aside budget on a first-come-first-served basis until the budget has been exhausted. Any unused portions will not be carried forward into the following year. Once the budget is exhausted, federal projects can still demonstrate conformity using other provisions in the conformity rule.

3. The EPA's Review of the State's Submission

We propose to approve the general conformity budgets in the 2016 AQMP of NO_X and VOC of 2.0 tpd of NO_X and 0.5 tpd of VOC (on an annual basis) from 2017 to 2030, and 0.5 tpd of NO_X and 0.2 tpd VOC in 2031, as meeting the requirements of CAA section 176(c) and 40 CFR 93.161. We find that the general conformity budgets in the 2016 AQMP: Are established for set time period; cover both precursors of ozone; are precisely quantified in terms of tpd (on an annual basis); and, along with all other emissions in the South Coast, are consistent with the attainment demonstrations for the 1-hour, 1997 and 2008 ozone NAAQS. We also find that the 2016 AQMP provides a procedure (*i.e.*, the tracking system) through which the District will ensure compliance with the budgets.

If we finalize our approval of these budgets, federal agencies can use these budgets to demonstrate that their projects conform to the SIP through a letter from the State and District confirming that the project emissions are accounted for in the SIP's general conformity budgets. The District will be responsible for tracking emissions from all projects against the budgets. Once the budgets are used, future federal projects will need to demonstrate conformity using a different method. Any federal projects that emit criteria pollutants or pollutant precursors other than those for which general conformity budgets are established will still need to demonstrate conformity for those pollutants or precursors.

K. Other Clean Air Act Requirements Applicable to Extreme Ozone Nonattainment Areas

In addition to the SIP requirements discussed in the previous sections, the CAA includes certain other SIP requirements applicable to Extreme ozone nonattainment areas, such as the South Coast. We describe these provisions and their current status below.

1. Enhanced Vehicle Inspection and Maintenance Programs

Section 182(c)(3) of the CAA requires states with ozone nonattainment areas classified under subpart 2 as Serious or above to implement an enhanced motor vehicle I/M program in those areas. The requirements for those programs are provided in CAA section 182(c)(3) and 40 CFR part 51, subpart S.

Consistent with the 2008 Ozone SRR, no new I/M programs are currently required for nonattainment areas for the 2008 ozone NAAQS.[174] The EPA previously approved California's I/M program in the South Coast as meeting the requirements of the CAA and applicable EPA regulations for enhanced I/M programs.[175]

2. New Source Review Rules

Section 182(a)(2)(C) of the CAA requires states to develop SIP revisions containing permit programs for each of its ozone nonattainment areas. The SIP revisions are to include requirements for permits in accordance with CAA sections 172(c)(5) and 173 for the construction and operation of each new or modified major stationary source for VOC and NO_X anywhere in the nonattainment area.[176] The 2008 Ozone SRR includes provisions and guidance for nonattainment new source review (NSR) programs.[177] The EPA has previously approved the District's NSR rules into the SIP based in part on a conclusion that the rules adequately addressed the NSR requirements specific to Extreme areas.[178] On December 13, 2018, the EPA approved the District's 2008 ozone certification that its NSR program previously approved into the SIP is adequate to meet the requirements for the 2008 ozone NAAQS.[179]

3. Clean Fuels Fleet Program

Sections 182(c)(4)(A) and 246 of the CAA require California to submit to the EPA for approval measures to implement a Clean Fuels Fleet Program. Section 182(c)(4)(B) of the CAA allows states to opt-out of the federal clean-fuel vehicle fleet program by submitting a SIP revision consisting of a program or programs that will result in at least equivalent long-term reductions in ozone precursors and toxic air emissions.

In 1994, CARB submitted a SIP revision to the EPA to opt-out of the federal clean-fuel fleet program. The submittal included a demonstration that California's low-emissions vehicle program achieved emissions reductions at least as large as would be achieved by the federal program. The EPA approved the SIP revision to opt-out of the federal program on August 27, 1999.[180] There have been no changes to the federal Clean Fuels Fleet program since the EPA approved the California SIP revision to opt-out of the federal program, and thus, no corresponding changes to the SIP are required. Thus, we find that the California SIP revision to opt-out of the federal program, as approved in 1999, meets the requirements of CAA sections 182(c)(4)(A) and 246 for South Coast for the 2008 ozone NAAQS.

4. Gasoline Vapor Recovery

Section 182(b)(3) of the CAA requires states to submit a SIP revision by November 15, 1992, that requires owners or operators of gasoline dispensing systems to install and operate gasoline vehicle refueling vapor recovery ("Stage II") systems in ozone nonattainment areas classified as Moderate and above. California's ozone nonattainment areas implemented Stage II vapor recovery well before the passage of the CAA Amendments of 1990.[181]

Section 202(a)(6) of the CAA requires the EPA to promulgate standards requiring motor vehicles to be equipped with onboard refueling vapor recovery (ORVR) systems. The EPA promulgated

[174] 2008 Ozone SRR, 80 FR 12264, at 12283 (March 6, 2015), and section 3.6 of Chapter 3 of the 2016 Ozone Plan.

[175] 75 FR 38023 (July 1, 2010).

[176] See also CAA sections 182(e).

[177] 80 FR 12264 (March 6, 2015).

[178] On December 4, 1996 (61 FR 64291), the EPA approved SCAQMD's NSR rules (the District's Regulation XIII) for the South Coast as satisfying the NSR requirements in title I, part D of the CAA for Extreme ozone nonattainment areas. See also 64 FR 13514 (March 19, 1999), 71 FR 35157 (June 19, 2006), 77 FR 31200 (May 25, 2012), and 80 FR 24821 (May 1, 2015).

[179] 83 FR 64026 (December 13, 2018).

[180] 64 FR 46849 (August 27, 1999).

[181] General Preamble, 57 FR 13498 at 13514 (April 16, 1992).

the first set of ORVR system regulations in 1994 for phased implementation on vehicle manufacturers, and since the end of 2006, essentially all new gasoline-powered light and medium-duty vehicles are ORVR-equipped.[182] Section 202(a)(6) also authorizes the EPA to waive the SIP requirement under CAA section 182(b)(3) for installation of Stage II vapor recovery systems after such time as the EPA determines that ORVR systems are in widespread use throughout the motor vehicle fleet. Effective May 16, 2012, the EPA waived the requirement of CAA section 182(b)(3) for Stage II vapor recovery systems in ozone nonattainment areas regardless of classification.[183] Thus, a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone NAAQS.

While a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone NAAQS, under California State law (*i.e.,* Health and Safety Code section 41954), CARB is required to adopt procedures and performance standards for controlling gasoline emissions from gasoline marketing operations, including transfer and storage operations. State law also authorizes CARB, in cooperation with local air districts, to certify vapor recovery systems, to identify defective equipment and to develop test methods. CARB has adopted numerous revisions to its vapor recovery program regulations and continues to rely on its vapor recovery program to achieve emissions reductions in ozone nonattainment areas in California.

In the South Coast, the installation and operation of CARB-certified vapor recovery equipment is required and enforced by SCAQMD Rules 461 ("Gasoline Transfer and Dispensing") and 462 ("Organic Liquid Loading"). These rules were most recently approved into the SIP on April 11, 2013, and July 21, 1999, respectively.[184]

5. Enhanced Ambient Air Monitoring

Section 182(c)(1) of the CAA requires that all ozone nonattainment areas classified as Serious or above implement measures to enhance and improve monitoring for ambient concentrations of ozone, NO_X, and VOC, and to improve monitoring of emissions of NO_X and VOC. The enhanced monitoring network for ozone is referred to as the photochemical assessment monitoring station (PAMS) network. The EPA promulgated final PAMS regulations on February 12, 1993.[185]

On November 10, 1993, CARB submitted to the EPA a SIP revision addressing the PAMS network for six ozone nonattainment areas in California, including the South Coast, to meet the enhanced monitoring requirements of CAA section 182(c)(1) and the PAMS regulations. The EPA determined that the PAMS SIP revision met all applicable requirements for enhanced monitoring and approved the PAMS submittal into the California SIP.[186]

The 2016 AQMP discusses compliance with the CAA section 182(c)(1) enhanced monitoring requirements in terms of the District's "Annual Air Quality Monitoring Network Plan (July 2016)" (ANP).[187] The District's 2016 ANP describes the steps taken to address the requirements of section 182(c)(1), includes descriptions of the PAMS program and provides additional details about the PAMS network.[188] The EPA has approved the District's PAMS network as part of our annual approval of the District's ANP.[189]

Prior to 2006, the EPA's ambient air monitoring regulations in 40 CFR part 58 ("Ambient Air Quality Surveillance") set forth specific SIP requirements (see former 40 CFR 52.20). In 2006, the EPA significantly revised and reorganized 40 CFR part 58.[190] Under revised 40 CFR part 58, SIP revisions are no longer required; rather, compliance with EPA monitoring regulations is established through review of required annual monitoring network plans.[191] The 2008 Ozone SRR made no changes to these requirements.[192] As such, based on our review and approval of the 2016 ANP for South Coast, we find that the 2016 AQMP adequately addresses the enhanced monitoring requirements under CAA section 182(c)(1), and we propose to approve that portion of the plan.

6. CAA Section 185 Fee Program

Sections 182(d)(3) and 185 of the CAA require that the SIP for each Severe and Extreme ozone nonattainment area provide that, if the area fails to attain by its applicable attainment date, each major stationary source of VOC and NO_X located in the area shall pay a fee to the state as a penalty for such failure for each calendar year beginning after the attainment date, until the area is redesignated as an attainment area for ozone. States are not yet required to submit a SIP revision that meets the requirements of CAA section 185 for the 2008 ozone NAAQS.[193]

IV. Proposed Action

For the reasons discussed in this notice, under CAA section 110(k)(3), the EPA is proposing to approve as a revision to the California SIP the following portions of the 2016 South Coast Ozone SIP submitted by CARB on April 27, 2017, December 5, 2018, and December 20, 2018:

- Base year emissions inventory element in the 2016 AQMP as meeting the requirements of CAA sections 172(c)(3) and 182(a)(1) and 40 CFR 51.1115 for the 2008 ozone NAAQS;
- RACM demonstration element in the 2016 AQMP as meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1112(c) for the 2008 ozone NAAQS;
- Updated attainment demonstration element for the revoked 1-hour ozone NAAQS in the 2016 AQMP and the 1-Hour Ozone Update as meeting the requirements of CAA section 182(c)(2)(A);[194]
- Updated attainment demonstration element for the revoked 1997 ozone NAAQS in the 2016 AQMP as meeting the requirements of CAA section 182(c)(2)(A);
- Attainment demonstration element for the 2008 ozone NAAQS in the 2016 AQMP as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108;

[182] 77 FR 28772, at 28774 (May 16, 2012).

[183] See 40 CFR 51.126(b).

[184] 78 FR 21542 and 64 FR 39037.

[185] 58 FR 8452 (February 12, 1993).

[186] 82 FR 45191 (September 28, 2017).

[187] 2016 AQMP, Table 6–2, page 6–17.

[188] 2016 ANP, 13–15, 28 and appendix A, 8. Starting in 2007, the EPA's monitoring rules at 71 FR 61236 (October 17, 2006) required the submittal and EPA action on ANPs. SCAQMD's 2016 ANP can be found in the docket for today's action.

[189] Letter dated October 31, 2016, from Gwen Yoshimura, EPA Region IX to Matt Miyasoto, Deputy Executive Officer, SCAQMD, approving the 2016 South Coast ANP.

[190] 71 FR 61236 (October 17, 2006).

[191] 40 CFR 58.2(b) now provides "The requirements pertaining to provisions for an air quality surveillance system in the SIP are contained in this part."

[192] The 2008 ozone SRR addresses PAMS-related requirements at 80 FR 12264, at 12291 (March 6, 2015).

[193] See 40 CFR 51.1117. For the South Coast, a section 185 SIP revision for the 2008 ozone NAAQS will be due on July 20, 2022.

[194] Because the 1-hour ozone attainment demonstration in the 1-Hour Ozone Update does not rely on advanced control technology measures under CAA section 182(e)(5), final approval of the attainment demonstration in the 1-Hour Ozone Update would fulfill CARB's commitment, in adopting the 2012 AQMP, to achieve by January 1, 2022, aggregate emissions reductions from advanced control technology measures under CAA section 182(e)(5) or actual emission decreases that occur and to develop, adopt and submit contingency measures by 2019 if advanced control technology measures do not achieve planned reductions.

• SCAQMD's commitments in the 2016 AQMP and District Resolution 17–2 to adopt, submit, and implement certain defined measures, as listed in tables 4–2 and 4–4 of Chapter 4 in the 2016 AQMP, and to achieve specific aggregate emission reductions (shown in tables 4–9 through 4–11 of the 2016 AQMP) by 2022, 2023 and 2031 for the 1-hour ozone NAAQS, 1997 ozone NAAQS and 2008 ozone NAAQS, respectively, and to substitute any other measures as necessary to make up any emission reduction shortfall; [195]

• CARB's commitments in the 2016 State Strategy and CARB Resolution 17–7 to bring to the CARB Board for consideration the list of proposed SIP measures outlined in the 2016 State Strategy and included in attachment A (to Resolution 17–7) according the schedule set forth in attachment A, and to achieve the aggregate emission reductions in the South Coast of 113 tpd of NO_X and 50 to 51 tpd of VOC by 2023 for the 1997 ozone NAAQS, and 111 tpd of NO_X and 59 to 60 tpd of VOC by 2031 for the 2008 ozone NAAQS; [196]

• The provisions in the 2016 State Strategy for the development of new technology measures for attainment of the 1997 ozone NAAQS and 2008 ozone NAAQS in the South Coast pursuant to CAA section 182(e)(5) and CARB's commitment in Resolution 17–8 to adopt and submit by 2028 contingency measures to be implemented if the new technology measures do not achieve the planned emissions reductions for the 2008 ozone NAAQS, as well as additional attainment contingency measures meeting the requirements of CAA section 172(c)(9); [197]

• ROP demonstration element in the 2016 AQMP as meeting the requirements of CAA 182(b)(1) and 40 CFR 51.1110(a)(2) for the 2008 ozone NAAQS;

• RFP demonstration element in the 2018 SIP Update as meeting the requirements of CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B), and 40 CFR 51.1110(a)(2)(ii) for the 2008 ozone NAAQS;

• VMT emissions offset demonstration element in the 2016 AQMP as meeting the requirements of CAA section 182(d)(1)(A) and 40 CFR 51.1102 for the 2008 ozone NAAQS;

• Clean fuels or advanced control technology for boilers element in the 2016 AQMP as meeting the requirements of CAA section 182(e)(3) and 40 CFR 51.1102 for the 2008 ozone NAAQS;

• Motor vehicle emissions budgets in the 2018 SIP Update for the RFP milestone years of 2020, 2023, 2026, 2029, and the attainment year of 2031 (see Table 15) because they are consistent with the RFP and attainment demonstrations for the 2008 ozone NAAQS proposed for approval herein and meet the other criteria in 40 CFR 93.118(e);

• General conformity budgets of NO_X and VOC of 2.0 tpd of NO_X and 0.5 tpd of VOC (on an annual basis) from 2017 to 2030, and 0.5 tpd of NO_X and 0.2 tpd VOC in 2031, as meeting the requirements of CAA section 176(c) and 40 CFR 93.161;

• Enhanced vehicle inspection and maintenance program element in the 2016 AQMP as meeting the requirements of CAA section 182(c)(3) and 40 CFR 51.1102 for the 2008 ozone NAAQS;

• Clean fuels fleet program element in the 2016 AQMP as meeting the requirements of CAA sections 182(c)(4)(A) and 246 and 40 CFR 51.1102 for the 2008 ozone NAAQS; and

• Enhanced monitoring element in the 2016 AQMP as meeting the requirements of CAA section 182(c)(1) and 40 CFR 51.1102 for the 2008 ozone NAAQS.[198]

With respect to the MVEBs, we are proposing to limit the duration of the approval of the MVEBs to last only until the effective date of the EPA's adequacy finding for any subsequently submitted budgets. We are doing so at CARB's request and in light of the benefits of using EMFAC2017-derived budgets prior to our taking final action on the future SIP revision that includes the updated budgets.

We are also proposing, under CAA section 110(k)(3), to approve District Rule 301 ("Permitting and Associated Fees") (paragraphs (e)(1)(A) and (B), (e)(2), (e)(5) and (e)(8)) based on the public draft version submitted to us on May 20, 2019, for parallel processing, as meeting the requirements of CAA section 182(a)(3)(B) and 40 CFR 51.1102 for the 2008 ozone NAAQS; and

Lastly, we are proposing, under CAA section 110(k)(4), to approve conditionally the contingency measure element of the 2016 South Coast Ozone SIP as meeting the requirements of CAA sections 172(c)(9) and 182(c)(9) for RFP contingency measures. Our proposed approval is based on commitments by the District and CARB to supplement the element through submission, as a SIP revision (within one year of final conditional approval action), of a new or revised District rule or rules that would include a more stringent requirement or would remove an exemption if an RFP milestone is not met.[199]

The EPA is soliciting public comments on the issues discussed in this document. We will accept comments from the public on this proposal for the next 30 days and will consider comments before taking final action. With respect to District Rule 301 (paragraphs (e)(1)(A) and (B), (e)(2), (e)(5) and (e)(8)), in addition to consideration of public comments, we will not take final action until the District completes its public review and adoption process and until CARB submits the final adopted version of the relevant portions of the District rule to the EPA for approval as a revision to the California SIP.

V. Incorporation by Reference

In this action, the EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference portions of District Rule 301 regarding emissions statement requirements discussed in section III.B of this

[195] Final approval of SCAQMD's commitments in the 2016 AQMP would update the corresponding commitments made by the District in the 2007 South Coast Ozone SIP for the 1997 ozone NAAQS and in the 2012 AQMP for both the 1997 ozone NAAQS and the 1-hour ozone NAAQS.

[196] Final approval of CARB's commitments in the 2016 State Strategy for the South Coast would update the corresponding commitments by CARB in the 2007 South Coast Ozone SIP for the 1997 ozone NAAQS.

[197] For the purposes of the 2007 South Coast Ozone SIP, CARB committed to develop, adopt and submit by 2020 contingency measures to be implemented if the new technologies do not achieve the planned emissions reductions for the 1997 ozone NAAQS, as well as additional attainment contingency measures meeting the requirements of CAA section 172(c)(9). The EPA approved that commitment at 77 FR 12674, 12695 (March 1, 2012). CARB's pre-existing commitments with respect to section 182(e)(5) and section 172(c)(9) attainment contingency measures for the South Coast for the 1997 ozone NAAQS are not affected by today's proposed action on the 2016 South Coast Ozone SIP.

[198] Regarding other applicable requirements for the 2008 ozone NAAQS in the South Coast, the EPA has previously approved SIP revisions that address the nonattainment area requirements for NSR and for implementation of RACT for the South Coast for the 2008 ozone NAAQS. See 83 FR 64026 (December 13, 2018) (NSR) and 82 FR 43850 (September 20, 2017) (RACT). SIP revisions for the South Coast addressing the penalty fee requirements under CAA sections 181(d)(4) and 185 are not yet due for the 2008 ozone NAAQS.

[199] Letter dated January 29, 2019, from Wayne Nastri, SCAQMD Executive Officer, to Richard Corey, CARB Executive Officer; and letter dated February 13, 2019, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX. Also see letter dated May 2, 2019, from Wayne Nastri, SCAQMD Executive Officer, to Richard Corey, CARB Executive Officer; and letter dated May 20, 2019, from Michael Benjamin, CARB, to Amy Zimpfer, EPA Region IX.

preamble. The EPA has made, and will continue to make, these materials available through *www.regulations.gov* and at the EPA Region IX Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

VI. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely proposes to approve, or conditionally approve, state plans as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: May 22, 2019.

Michael Stoker,

Regional Administrator, Region IX.

[FR Doc. 2019–12176 Filed 6–14–19; 8:45 am]

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